PROFESSIONAL WOMEN AND MINORITIES

A Manpower Data Resource Service

Eighth Edition

BETTY M. VETTER

COMMISSION ON PROFESSIONALS IN SCIENCE AND TECHNOLOGY

1500 Massachusetts Avenue N.W., Suite 831

Washington, DC 20005

Telephone: (202) 223-6995

Price: $85.00

December 1989

copyright 1989 by CPST

ISSN: 0190-1796

The Commission on Professionals in Science and Technology, (formerly the Scientific Manpower Commission), A Participating Organization of the American Association for the Advancement of Science, is a nonprofit corporation with various categories of membership open to professional societies, corporations, institutions and individuals who share its interests and objectives. Commissioners are appointed by member Societies and Corporations.

The Commission is charged with the collection, analysis and dissemination of reliable information pertaining to the human resources of the United States in the fields of science and technology; promotion of the best possible programs of education and training for potential scientists, engineers and technicians; and the development of policies of utilization of scientific and technological manpower by educational institutions, industry and government for optimum benefit to the nation.

MEMBER SOCIETIES

American Association for the
  Advancement of Science*
American Astronomical Society
American Chemical Society*
American Gas Association
American Geological Institute
American Geophysical Union
American Institute
  of Biological Sciences
American Institute of Chemists
American Institute of Physics *
American Mathematical Society
American Medical Association
American Meteorological Society
American Nuclear Society
American Psychological Association*
American Physical Society
Association for Computing Machinery
Federation of American Societies
  for Experimental Biology
Mathematical Association of America
National Science Teachers Association*
Optical Society of America
Society for Industrial
  and Applied Mathematics

CORPORATE MEMBERS

Aerospace Corporation
Amoco Foundation*
Bell Labs
Boehringer Ingelheim Corp.
Celanese Corporation
Chevron Corporation*
David Sarnoff Research Center
Dow Chemical U.S.A.
E. I. Du Pont de Nemours & Co.*
Eastman Kodak
Exxon Company U.S.A.*
Fisons Pharmaceuticals
Ford Motor Company
General Electric Company*
GTE Service Corporation
IBM
The Mitre Corporation
Monsanto Co.
Olin Corporation
Phillips Petroleum
PPG Industries
Procter and Gamble*
Rohm and Haas Company
Sandia National Labs.
Shell Companies Foundation*
UNOCAL Corporation*

*Patron

EXECUTIVE COMMITTEE

Justin Collat, President
Stephen Carpenter, Vice President
Alvin Bernstein, Treasurer
Richard Wilcox, Member-at-Large
Shirley Malcom, AAAS Liaison

STAFF

Betty M. Vetter, Executive Director
Eleanor L. Babco, Associate Director
Sue V. Barthel, Manager of
Publication Sales

TABLE OF CONTENTS

FOREWORD 1

INTRODUCTION 1
Organization of the Book 1
The Data 1
Correlating Degree and Workforce Data 2
Terminology for Minority Groups 2

AFFIRMATIVE ACTION 3

Statutes and Orders for Affirmative Action 3
Regulation and Enforcement 3
Definition of Affirmative Action 4

CHAPTER 1 - GENERAL ENROLLMENTS 5

Live Births, by Sex, 1937-87 5

U.S. Population

U.S Population by Race/Ethnicity 6
Children 3-21 in Special Education Programs, by Handicap 8
School Age Resident Population by Sex and Race 1960-86 9
Percent Enrolled by sex, race and age 9

High School Students and Graduates

Science and Mathematics Proficiency of 17 Year Olds 10
Graduates and Population 11
Carnegie Units Earned by Sex and Race 12
Highest Educaional Level of Age 18 and Over by Sex, Race, Age 12
SAT and ACT Scores by Sex and Race 14

U. S. Population and College Enrollments 17

Enrollment Rates of Recent Graduates 17
Minority Enrollments by State 18

College Freshmen

Racial Background of Students, 1971-88 21
Probable Major by Sex, 1971-88 21
Probable Career Choice, 1972-88 23

College Students Enrolled

Total Enrollments by Sex and Race 24
Total Enrollments by Sex and Age 26
Enrollment of Persons 14-34 27
Enrollment Rates of 18-24 Year Olds by Race/Ethnicity 27
Enrollment by Attendance, Control, Sex, and Level 28
Enrollment by Level and Race/Ethnicity 29
Foreign Studenmts by Field and Country of Origin 31

Graduate Students Enrolled

Enrollments by Field, Sex, Status and Citizenship 32
Enrollment by Sex, Status and Control 33
First Professional Enrollment 33
Total in Science and Engineering, by Field and Sex 34
Full Time in S/E in Ph.D. Institutions by Field and Sex 35
Total in S/E by Field, Citizenship and Race 36
Full Time in S/E in Ph.D. Schools by Field, Citizenship & Race 37
Foreign, Full Time in S/E 38
Full Time in S/E by Source of Support, Field, and Sex 39
Source of Support of PhD Recipients by Field, Race, and Citizenship 40

CHAPTER 2 - GENERAL DEGREES 41

Doctorates

to Women, by Field and Decade, 1920-88 41
by Field, Sex, Race/Ethnicity and Citizenship 1987 and 1988 42
in S/E by Citizenship and Visa Type, 1960-88 43
to U.S. Citizens and Permanent Visa, by Racial/Ethnic Group, 1988 44
Citizenship of Asian PhD Recipients by Visa Type, 1977-1988 45

Doctorates (continued)

to U.S. Citizens by Field, Racial/Ethnic Group and Sex 1975-88 46
Foreign Recipients with Firm Postgrad Commitments 52
Employment Sector Commitments of PhD Recipients by Field, Sex, and Race ...52
by Sources of Support in Graduate School and Sex, 1974-88 53

All Degree Levels

by Level and Sex 1870-1990 55
Percent of Bachelor's and Masters to Women, by Field 1972-1987................56
in Science and Engineering Fields by Sex and Level 1950-87 57
by Fine Field, Level and Sex, 1987 60
by Level, Sex and Race/Ethnicity, 1987 63
in S/E by Level, Field, Sex and Race/Ethnicity 1985...........................66
in S/E by Level, Field, Sex and Race/Ethnicity 1987...........................67
Bachelor's in S/E by Field, Sex and Race/Ethnicity 1985 & 1987 68
Percent Women Among S/E Bachelors Graduates by Race/Ethnicity 1985, 1987..69
and Enrollments of Minority Students by Level and State, 1987.................70
Graduate Degree Attainment Rates by Sex, 1972-87 71

Associate Degrees by Field and Sex 72

CHAPTER 3 - GENERAL PROFESSIONS 73

Doctorate Degrees by Sex, 1920-87..73

First Professional Degrees

by Field, Sex and Race 1972-87 74
Enrollments by Field and Sex 75
Degrees by field and Sex through 1989 76

Architecture

Degrees, by Sex and Level, 1971-87 77
Enrollments by Program, Sex, Minority Group and Citizenship, 1975-89 78
AIA Membership, by Sex and Minority Group, 1989 78

Accounting

Professionals Employed, by Sex & Minority Group, 1976-88 79
Placement of Graduates from Minority Schools, 1973-87 79
Degrees Awarded by Year, Level & Sex, 1972-87 80
CPA's in Major Firms by Sex & Minority Group, 1976-88........................80
Minority Partners in Major Accounting Firms, 1984, 1986, and 1988..........81

Business Management

Enrollment and Graduates by Minority Status, Fall 1985 and 1986.............81
Degrees by Sex and Level, 1972-1987 81
Graduate Enrollment by type of Institution, Sex and Race/Ethnicity..........82
Business Faculty at AACSB Schools by Sex & Minority Group, 1986 83

Law

Teachers in ABA Approved Law Schools by Sex & Minority Status 1986-87 83
Degrees Awarded by Level & Sex, 1970-87.......................................84
Enrollments, by Sex and Minority Group, 1970-1988.............................85
Federal Workers, by Sex & Minority Group, 1988 86

CHAPTER 4 - GENERAL WORK FORCE 87

School Years Completed by persons 18 and Over by Age, Sex, and Race........87
Hispanic Population and Employment by Age and Sex 1980-87....................88
Schooling and Occupation of Persons 16 and over by Sex and Ethnicity 1987 ..89
School Years Completed by Persons Age 25 and Over; and 25-29, by Race 90
Persons 18 and Over with Bachelors Degree by Field, Sex, Race and Age.......91
Employed Persons by Detailed Occupation, Sex and Race, 1988 92

Doctoral Population

Scientists and Engineers by Field, Sex and Race/Ethnicity 1987 96
by Field, Years of Experience and Sex, 1987 97
by Field, Sex, Race and Citizenship, 1987 98
Blacks Among U.S. Doctorates Awarded 1958-88 by Field 99
Scientists and Engineers by Field, 1987
Sex and Employment Status 99
Employed, by Employment Sector and Sex..100
by Sex and Race 100

Doctoral Population (continued)

Scientists and Engineers by Field, 1987
Employed, by Work Activity and Sex 101
by Type of Employer, Sex and Race/Ethnicity 102
Minority, by Race/ethnicity and Employment Sector 103
Humanities Doctorates by Field, Sex and Race/Ethnicity 104
Women as a Percent of All Employed Workers.......................................105

U.S. Scientists and Engineers by Field

Scientists and Engineers by Sex, 1988 105
Scientists and Engineers 1986
by Sex, Race/Ethnicity and Highest Degree..................................106
by Sex and Primary Work Activity 109
Bachelor's Degrees 1950-85 Compared with 1986 Scientists and Engineers 110
Physically Handicapped Scientists & Engineers 1986 110
Immigrant Scientists and Engineers by Major Field and Entry Method 1966-86..111
Highest Education Level of 1980 High School Seniors in 1986 112

Federal Employment, October 31, 1988

Scientists & Engineers by Management/Supervisory Status, Sex & Race.......113
Minority PhDs in Federal Government, 1973-87 114
CHAPTER 5 - ACADEMIC WORK FORCE...115

Doctoral in Academic Institutions 1987

by Field of Science, Rank and Sex 115
by Field of Science, Rank and Race/Ethnic Group 117
by Field of Science Rank and Sex 118
Tenure Status
in Science and Engineering by Field and Sex, 1987 119
in Science and Engineering by Field and Minority, 1987.......................120
in Humanities by Field and Sex, 1987...121
in Humanities by Field, Age Group and Sex 122

Full Time Faculty

by Race/Ethnicity, Rank and Sex...123
with Tenure by Rank, Sex and Control, Selected Years, 1981-86..............124

Scientists and Engineers

Postdoctoral and Non-Faculty Doctoral Staff by Field and Sex, 1987...........126
Postdoctorates by Field and Citizenship, 1984-87..............................127
at Four Year Colleges by Field, Sex and Race/Ethnicity 1986 128

Teachers

Characteristics of Physics Teachers by Sex 1987 128
Faculty in Higher Education by Sex, 1869-1984 129
Women as a Percent of Pre-College Teachers, 1928-87 129
Percent of Math and Science Teachers, by Sex and Grade Range, 1986.......129
Characteristics of Public School Teachers 1971 - 1986 130
Race of Teachers and Principals in Public Schools 130
Highest Degree and Teaching Level by Sex and Race 130
Characteristics of Private School Teachers 1961-1986 131
Women College Presidents, by Type of Institution and Year, 1975-87 132

CHAPTER 6 - PHYSICAL, MATHEMATICAL, AND COMPUTER SCIENCES.........133

Physical Sciences

Degrees by Level, Subfield and Sex, 1950-1987 133
Doctorates Awarded by Citizenship, 1960-868 136
Federal Workers by Occupation, Minority Group and Sex, 1988 137

Chemistry 140

Degrees Awarded
in Biochemistry by Level and Sex, 1947-87 138
Doctoral by Subfield and Sex, 1920-88...139
by Citizenship and Visa Status 139
by Level, ACS Certification, Sex & Minority Group, 1971-88 141
Faculty by Sex, Rank and Tenure Status 1971-1987............................142

Chemistry (continued)

- American Chemical Society Members, 1989 143
  - by Age, Highest Degree and Sex 143
  - by Degree Level, Sex and Minority Group, 1976-89 143

Physics and Astronomy 144

- Degrees Awarded
  - Doctoral, by Subfield and Sex, 1920-88 144
  - Astronomy, by Level and Sex, 1947-87 144
  - Doctoral by Citizenship and Visa Status, 1967-88 145
- Physics Degrees by Minority Group, Sex, and Level, 1988 146
- Race/Ethnicity and Citizenship of AIP Members 1986 146
- AIP Members by Type of Employer and Sex 1986 146
- Graduate Enrollments by Minority Group and Sex 1981 - 1987 147
- Graduate Students in Physics and in Astronomy, 1984-85 - 1986-87 148

Geosciences 149

- Degrees Awarded
  - Doctoral by Sex and Subfield, 1920-88 149
  - by Subfield, Level and Sex 1976-88 150
- Enrollments
  - by Level, Subfield and Sex, 1976-88 152
  - Minority, by Level and Sex 1988 154
- Minority Degrees 1988 154
- Faculty by Rank and Sex, 1986-87 155
- Employed Natural Scientists 1974-86 156

Mathematical and Computer Sciences 156

- Degrees Awarded
  - Doctoral
    - by Subfield and Sex, 1960-88 156
    - by Sex, Race and Citizenship, 1985-88 157
  - by Level and Sex, for Math and Computer Science, 1950-87 158
  - **Statistics**, by Level and Sex, 1956-87 161
- Faculty, by Type of Institution, Rank, Sex and Tenure, 1979-89 162
- U.S. Citizen Doctorates by Sex 1973-87 164
- Employment of New PhDs by Sex and Percent Women Faculty 1988 164
- Federal Workers by Occupation, Sex and Minority Group 1988 165

CHAPTER 7 - ENGINEERING, TECHNOLOGY AND TECHNICIANS 167

Engineering

- Degrees Awarded
  - Doctoral by Sex and Subfield, 1920-88 167
  - Doctoral by Citizenship, 1960-88 168
  - by Level, Subfield and Sex, 1950-87 169
  - by Level and Sex, 1968-89 172
  - by Level, Sex, Race and Citizenship, 1974-1989 173
  - by Level, Sex, Race/Ethnicity and Subfield 1984-89 174
  - Bachelors, by Subfield, Sex, Minority Group and Citizenship 1975-89 177
  - by Level and Minority Group, 1975-89 180
  - Leading Schools in Awards to Women, 1980-88 181
  - Leading Schools in Bachelor's Awards to Minorities, 1980-88 185
- Enrollments
  - Related to H.S. Graduates and College Enrollments, 1970-89 189
  - by Level, Sex and Minority Group, 1975-88 190
  - by Level, Subfield, Sex & Minority Group, Fall, 1987 192
- Enrollments and Degrees
  - Nuclear Engineering by Sex, Minority Group & Level, 1979-88 193
  - Radiation Protection by Sex, Minority & Level, 1980-88 194

Engineering Technology

- Degrees Awarded
  - Bachelor's by Subfield, Sex and Minority Group, 1984-89 195
  - by Sex and Level, 1971-87 196
  - Associate by Subfield, Sex and Minority Group, 1984-88 197
- Enrollments by Level, Sex and Minority Group, 1976-88 198
- Federal Engineers, by Subfield, Sex and Minority Group, 1988 199

CHAPTER 8 - AGRICULTURAL, BIOLOGICAL, MEDICAL & HEALTH SCIENCES ...201

Agricultural and Biological Sciences........201

Degrees Awarded

- Doctorates in Agriculture by Subfield and Sex, 1960-88........201
- Doctorates in Biological Sciences by Subfield and Sex, 1960-88........202
- In Life Sciences by Level, Field and Sex, 1950-87........203
- Doctorates by Field and Citizenship 1960-87........206

Federal Workers by Occupation, Sex and Minority Group, 1988........208

Health and Medical Professions........209

Doctorates Awarded by Subfield and Sex, 1920-1988........209

Medicine

- Applicants, Enrollments and Graduates, by Sex, 1968-89........210
- Graduates by Minority Group and Sex, 1974-88........211
- Enrollments by Minority Group and Sex 1972-89........212
- Student Repeaters by Level and Minority Group, 1974-88........213
- Minority Women Graduates, 1980-88........214
- Residents by Minority Group, 1983-87........214
- Faculty by Sex and Minority Group, 1975-88........215
- Active Health Personnel by Sex and Occupation to 2000........215

Osteopathic Medicine

- Enrollments and Graduates by Sex, 1969-89........216
- Enrollments by Level and Minority Group, 1978-89........216

Dentistry

- Applicants, Enrollments and Graduates by Sex, 1969-89........217
- Enrollments by Minority Group, 1973-89........217
- Graduates by Minority Group, 1971-88........218
- Dental Faculty by Minority Group and Sex, 1986-87 and 1988-89........218

Veterinary Medicine

- Enrollments and Graduates by Sex, 1969-89........219
- Enrollments by Level, Sex and Minority Group, 1989........219
- Veterinarians by Sex, 1983-89........220
- Faculty by Sex and Minority Status, 1986-89........220

Optometry

- Enrollments and Graduates by Sex, 1970-89........221
- Enrollments by Minority Group, 1974-89........222

Pharmacy

Degrees Awarded

- by Level and Sex, 1969-87........223
- Doctoral, by Type of Degree and Sex, 1920-88........223
- by Level, Sex and Ethnic Group 1976-88........224

Enrollments and Graduates by Sex, 1969-88........225
Enrollments by Minority Group and Sex, Fall 1974-88........225
Graduate Enrollments by Program, Level, Minority and Sex, 1988........226

Podiatry

- Enrollments by Sex, 1970-89........227
- Enrollments by Minority Group, 1979-89........227

Nursing

- Enrollments and Graduates by Program and Sex 1972-85........228
- Degrees Awarded by Level and Sex, 1970-87........229

Other Allied Health Fields

Degrees Awarded by Level and Sex, 1970-87

- Speech-Language Pathology and Audiology........229
- Medical Laboratory Technologies........230
- Physical Therapy........230
- Health Services Administration........231

Enrollments in Public Health by Sex and Minority Group, 1975-87........231
Federal Workers by Occupational Title, Sex and Minority Group, 1988........232

CHAPTER 9 - SOCIAL AND BEHAVIORAL SCIENCES 233

Degrees Awarded
  Doctorates by Subfield and Sex, 1960-88 233
  Doctorates by Field, Citizenship and Minority Group, 1973-88 234
  By Level, Field and Sex 1950-87 235
  By Citizenship 1960-88 238
Federal Workers by Occupation, Sex and Minority Group, 1988 239

Anthropology, Sociology and Social Work

  Postdoctoral Plans 1975-88 240
Degrees
  in Social Work and Helping Services by Level and Sex, 1971-857 240

Political Science

  Faculty by Sex, Rank, and Tenure Status 1988 241

Psychology

  Faculty, by Type of Department, Sex and Minority Group, 1987 242

CHAPTER 10 - ARTS, HUMANITIES AND EDUCATION 243

Arts and Humanities

  Doctoral Awards by Subfield and Sex, 1920-88 243
  Demographic Characteristics of Humanities PhDs by Field, 1987 244
  Linguistics Degrees Awarded by Level and Sex, 1956-87 245

Education

  Doctoral Awards by Subfield and Sex, 1920-87 246
  Degrees by Level and Sex, 1971-87 247
  Education Doctorates Awarded to Minorities by Minority, 1975-88 247
  Federal Workers by Occupation, Sex and Minority Group, 1988 248

BIBLIOGRAPHY OF DATA SOURCES 249

INDEX 253

CHARTS

Chart No.	Subject	Page
1-1	Percent Minorities in the United States, Ages 5-9 and All Ages	8
1-2	Percent of College Students Who are Minorities, by State	18
1-3	Freshmen Men Planning Majors in Science or Engineering 1975-88	21
1-4	Freshman Women Planning Majors in Science or Engineering 1975-88	21
1-5	Percent Foreign Enrollment in Natural Science and Engineering 1965-87	29
2-1	Science and Engineering Doctorates by Citizenship and Visa Type, 1960-88	44
2-2	Citizenship of Asian PhD Recipients 1977-88	45
2-3	Percent Women Graduates in Natural Science and Engineering, All Science and Engineering and All Field, by Level, 1987	54
2-4	Percent Minorities and Foreign Students Earning Natural Science and Engineering Degrees, by Minority and Level, 1987	54
2-5	Percent of Natural Science and Engineering Bachelor's Degrees Awarded to Minorities, by Broad Field and Minority, 1987	69
3-1	Percent Women Earning First Professional Degrees, 1987	84
4-1	Percent U.S. Minorities in Various Population Groups by Minority and Educational Level	89
4-2	Employed Minority Science and Engineering PhDs by Minority and Field, 1987	103
4-3	Women as a Percentage of Employed Science and Engineering PhDs 1973-87	114
4-4	Minority Science and Engineering PhDs in Federal Government, by Minority, 1973-87	114
5-1	Tenure Status of PhD Scientists and Engineers in Academe, 1979-1987	125
6-1	Women Faculty in Graduate Degree-Granting Geoscience Departments	155
6-2	Women as a Percent of Employed Natural Scientists and Engineers by Field, 1974-86	166
6-3	U.S. Minority PhD Awards in Physical Sciences by Minority and Sex 1975-88	166
7-1	Women BS Graduates in Engineering 1976-89	172
7-2	Percent Women Among Engineering BS Graduates, by Minority 1987	200
7-3	Engineering Graduates as a Percentage of Freshmen Four Years Earlier, by Sex and Racial/Ethnic Group, 1972/76 to 1985/89	200
9-1	Employed Women Doctorates in Life, Social and Behavioral Sciences, 1976-86	242
10-1	PhDs in Education Awarded to Minorities, by Minority, 1975-88	247

FOREWORD

This book is designed to provide current and historical statistics about the professional segment of the U.S. population and particularly the participation and availability of women and minorities in those areas which generally require formal education to at least the baccalaureate level. Because more information is available in some fields than in others, the comprehensiveness of coverage varies. While we have attempted to locate all available data sources, and to provide the most current statistics available, we welcome notification of any data that we may have missed. Between editions, new data are published regularly in MANPOWER COMMENTS, a periodical digest available from the Commission on Professionals in Science and Technology.

We wish to thank those professional associations, women's groups and individuals who have responded to our request for current information or data, and for their permission to use that data in this compilation. We also express our appreciation to the more than 2,500 users of the earlier editions for their continued interest in the data, both to measure their progress and to formulate plans.

Our special thanks go to the Ford Foundation for a grant which supported the final six months of work in collecting, assembling, reviewing and publishing the first edition of this book in 1975. Without that first edition, this continuing data source would not have been possible. We also acknowledge with thanks the special assistance of Richard Vetter.

Betty M. Vetter

INTRODUCTION

Organization of the Book

The data tables are organized in ten chapters, and tables are numbered consecutively within each chapter.

The Table of Contents outlines both the chapter arrangement and the organization of tables within the chapter. The first five chapters on general enrollments, general degrees, general professions, general workforce and academic workforce include both tables which do not specify subject fields and tables where several subject fields are included. In the section on general professions, data for individual professions such as business administration and law follow tables that include data for multiple fields.

The organization of tables in chapters six through ten, which are devoted to subject fields, provides data on degrees (doctorates first) followed by enrollments, general workforce, academic workforce and federal workforce participation. Except for tables which include both sex and minority proportions, those which delineate the population by sex generally precede those which delineate by minority status.

When the field is designated at the top of the page, table headings do not necessarily include the name of the field.

When the year or years covered by the table are included within the table, the dates are not always repeated in the table title.

The Index is by page number. The Index, rather than the Table of Contents, is the place to begin a search for data in a particular field, since enrollment, degree and employment information about that field will also be found in the early chapters. Cross-indexing allows finding the data references in a number of ways.

The source or sources of data for each table are noted above the table. The bibliography, organized alphabetically by publisher, provides specific information about each source.

The Data

More than 200 published and previously unpublished data sources were used to prepare the statistical tables and charts in this book, including reports and other materials from government agencies, professional associations and women's and/or minority groups and caucuses. The source or sources for each table appear at the top of the table, with the full bibliographic entry provided in the Bibliography.

Generally, exact correlation of results of different surveys is not possible since it is rare to find two data sources with exactly the same time and population base. Different results occur because of differences in the survey populations, in the time frames, in the way similar questions were asked, in terminology, in analysis, or in the type of respondent. For example, degree data collected by the Center for Education Statistics is obtained from college and university registrars, while that collected by the professional societies generally comes from department heads and that collected by the National Research Council comes from the doctorate recipients themselves. Thus, while degree data will be similar, it is not identical from one source to another, usually because of differences in field taxonomy.

Different methods of analysis, particularly in data on minorities, also will produce different statistical results. The several problems for the date analyst include the method of treatment for non-respondents, the respondents who list multiple minority status, responses from a third party rather than from the individuals themselves, inclusion or exclusion of non-citizens in the survey population or unrepresentative population samples.

Differences in treatment of non-respondents to questions of sex or ethnicity may produce large statistical differences in calculating the proportion of minorities or women within a particular population.

Some surveys assume that non-respondents to the sex or ethnic question are in the same proportion as respondents, and remove all non-respondents before calculating the percentages of women and minority participants. Still others calculate percentages from a total which includes non-respondents, thus giving a lower percentage for minorities than may be the case. Additionally, many studies dealing with minority populations do not separate foreign nationals from U.S. citizens or those eligible for citizenship. This single factor, particularly within the Asian minority among scientists and engineers, changes the sex and minority proportion substantially, as does the inclusion of foreign nationals in the base numbers for enrollments and degrees in such graduate fields as engineering. This edition includes more data than were previously available on citizenship, particularly in the science and engineering fields.

In most data sets, minority data are not subdivided by sex, and conversely data on women fail to distinguish majority from minority women. Thus, the availability of minority women in specific fields is often difficult to determine. Where available, we have included both the sex and minority subdivision.

This book does not attempt to determine which data are more likely to be correct when differences occur, but when available, the population base used for calculating the percentages is indicated in the table title or footnotes.

Correlating Degree and Workforce Data

There are frequently fairly major differences between the proportions of degrees granted to women and minorities in any particular field and the proportions of those persons found in the workforce for that field. This may occur because of the later entry of women into a large male working population field switching, differences in nomenclature between degree fields and job titles, and because of the problems of similar but non-identical population bases outlined above. The lower proportion of women in a working population than their proportion of earned degrees may also indicate that proportionally more women than men have left the workforce in that field either temporarily or permanently. Some data sets show that women are somewhat less likely than men to find employment that is linked with their major field of study, particularly among recent graduates.

Few data are available on the workforce participation of women and minorities in the arts, humanities and education. One reason is that persons with degrees in those fields may appear in almost any occupation in the workforce, and are generally classed in the same field as the degree field only when they are in the academic workforce.

In many instances, this book incorporates both historical and current data so that progress may be measured and changing trend lines incorporated in planning for the future. In some cases, we have included older data because nothing more current could be obtained. However, in this edition, we have dropped most tables where the most recent data available are for 1983 or earlier.

Through the wording of table headings and the use of footnotes to tables, we have tried to offer as much information as possible regarding the inclusiveness of the data in any table. Usually a more comprehensive explanation of methodology can be found in the original data source which is listed in the Bibliography. A single source for much of the information is Guide to Data on Scientists and Engineers, (Scientific Manpower Commission, 1984), available in all university libraries. Research groups or other libraries may request a copy from the Commission on Professionals in Science and Technology.

Terminology for Minority Groups

Only in the past few years has a common set of designations for minority populations come into general use. In this book, tables generally use the terminology of the original source from which the table was derived.

AFFIRMATIVE ACTION

Federal laws and regulations prohibit discrimination in conditions of employment including recruitment, hiring, lay-off, discharge and recall, and in-service training; opportunities for promotion; participation in training programs; wages and salaries; sick leave time and pay; vacation time and pay; over-time work and pay; medical, hospital, life and accident insurance; and optional and compulsory retirement.

Statutes and Orders Requiring Equal Employment Opportunity and Affirmative Action

The Equal Pay Act of 1963, the first sex discrimination legislation enacted, requires equal pay for equal work regardless of sex. Title IX of the Education Amendments Act of 1972 extends the coverage to executive, administrative and professional employees, including all faculty; and to outside sales people.

Executive Order 11246 as amended by Executive Orders 11375 and 12086 prohibits discrimination in employment by all employers who hold federal contracts, and requires affirmative action programs by all federal contractors and sub-contractors. Firms with contracts over $100,000 and with 100 or more employees must develop and implement written programs of affirmative action.

Title VI of the Civil Rights Act of 1964 forbids discrimination against students on the basis of race, color, or national origin in all federally assisted programs. Employment is not generally covered except when employment is the purpose of the assistance.

Title VII of the Civil Rights Act of 1964 as amended by the Equal Employment Opportunity Act of 1972 forbids discrimination on the basis of race, color, national origin, religion or sex in any term, condition of privilege of employment, including sexual harassment, by unions, employment agencies and employers. The law was amended on March 24, 1972 to cover all public and private educational institutions, as well as state and local governments. It applies to all employers, public or private, whether or not they recieve any federal funds. Title VII covers all private employers of fifteen or more persons.

Title IX of the Education Amendments of 1972 forbids discrimination on the basis of sex in all federally assisted education programs in all institutions, public and private, that receive federal monies through grants, loans or contracts. The Supreme Court determined in the Spring of 1982 that Title IX's prohibition of sex discrimination applies to both students and employees of educational institutions. Title IX Regulations have been applied broadly to activities "assisted or benefited by federal funds," but the Supreme Court ruled in March 1984 that Title IX applies only to programs or activities that receive direct federal support, rather than to entire institutions.

The Civil Rights Restoration Act, passed over President Reagan's veto on March 22, 1988, extended coverage of the four federal civil rights statutes: Title IX of the Education Amendments of 1972, Title VI of the 1964 Civil Rights Act, Section 504 of the Rehabilitation Act of 1973, and the Age Discrimination Act of 1975.

Section 504 of the Vocational Rehabilitation Act of 1973, which bars discrimination against handicapped persons by federal contractors, and requires them to take affirmative action to hire such persons, is now supplemented by the Americans With Disabilities Act, moving through final legislative stages as this book goes to press. The act would take effect two years after presidential signature, and would apply to all employers with more than 25 employees. It also requires that new and renovated buildings be made accessible to persons in wheel chairs as well as to those with vision and hearing disabilities.

Regulation and Enforcement

Prior to 1978, a number of federal agencies were variously responsible for writing regulations to govern these orders and statutes and to enforce the regulations. These agencies included the Labor Department, the Justice Department, the Department of Health, Education and Welfare, and the Equal Employment Opportunity Commission which is appointed by the President.

On February 23, 1978, President Carter submitted to Congress a plan to reorganize federal equal employment opportunity enforcement activities. EEOC is the principal agency responsible for enforcement for all public and private non-federal employers and unions, and within the federal government. EEOC took over from the Labor Department on July 1, 1979 enforcement of the Equal Pay Act and the Age Discrimination Act.

Enforcement of Executive Order 11246 as amended by Executive Order 12086 and Executive Order 11375 remains with the Office of Federal Contract Compliance Programs (OFCCP) in the Department of Labor. All federal contractors deal with OFCCP.

The Justice Department continues to have responsibility for litigation against state and local governments under Title VII, and represents the government in suits against federal contractors. The Attorney General may initiate "pattern and practice" suits under Title VII in the public sector.

The Department of Education enforces compliance with Title IX.

What is Affirmative Action?

Broadly speaking, affirmative action consists of actions to end discrimination and to remedy the ffects of past discrimination. It includes such activities as notifying women's and minority groups about job penings, advertising job openings rather than relying on word-of-mouth notification, developing recruitment rocedures aimed at women and minorities as well as other qualified applicants, and providing equal pportunities for advancement.

Affirmative Action under Executive Order 11246 also requires establishment of an Affirmative ction Plan which includes numerical goals and time tables for increasing the participation of women and/or inorities.

Goals are targets for the inclusion of people previously excluded, and are an attempt to estimate ne composition of the employer's workforce if there were no illegal discrimination based on race or sex. In eneral, goals for professional positions are aligned with the number or percentage of qualified women or inorities available rather than with their general representation within the population.

Quotas, on the other hand, are illegal unless assigned by a court as the result of a finding of iscrimination, since they are in themselves discriminatory and act to keep some qualified people out of the pplicant pool to be considered.

Under the Executive Order, all job classifications must be reviewed in order to identify nder-utilization of women and minorities. Data should be provided simultaneously on race and sex. If current ecruitment practices have resulted in a "significantly lower representation" of women and minorities in the pplicant pool than would be expected from their availability in the labor force, then new sources of ecruitment must be developed. An employer is assumed to be utilizing "reasonable" numbers of persons in rotected classes if his workforce includes at least 80 percent of their representation within the eligible pulations.

Affirmative action plans are required to include a system of accountability and monitoring. This ystem may be centralized in an institution-wide or a corporation-wide office which maintains records and onitors individual units or departments and makes an annual report; or in individual units or departments which ay maintain records separately of all applicants and hires as well as records of the efforts made to recruit omen and minorities. In either case, records should allow for an ongoing analysis of all employment decisions recruiting, hiring, promoting and setting salaries.

The employer sets the criteria for every job, both in terms of the level of academic preparation equired, experience and other factors. The criteria must be applied equally to men and women and to those f all ethnic backgrounds. They must be clearly related to the job to be filled, and they must not in themselves e discriminatory.

The Uniform Guidelines on Employee Selection Procedures protect the rights of workers to be hired nd promoted on the basis of job-related standards and without regard to race, sex or national origin. These uidelines apply to all employers, public and private, including academic institutions. Their underlying principle that tests and other selection procedures that have an adverse impact on minorities and women are illegal nless validated by showing a clear relation between performance on the test and performance on the job. The uidelines adopt a "rule of thumb" as a practical but not absolute, means of determining whether there has been n adverse impact. Generally, a selection rate for any race, sex or ethnic group which is less than 80% of ne rate for the group with the highest selection rate is regarded as adverse impact. For professional positions which women or minorities represent less than 20% of the available pool, statistical evidence of such roportions will be necessary.

Evidence of the validity of a selection procedure generally is not required if there is no adverse npact. The guidelines provide that, in considering whether to take enforcement action, the government will ake into account the general posture of the employer regarding equal employment opportunity, including its ffirmative action plan and the results achieved under the plan.

Numerical goals have been upheld in the courts as relief for a substantiated pattern of iscrimination. Each goal is tailor-made to a specific situation, taking into account expected turnover, acancies, promotions and the availability of qualified women and minorities. The goal varies for different job lassifications and may be general as for "chemists" or more specific as for "doctoral organic chemists."

If an institution fails to meet its goals, and if adverse impact on women or minorities is indicated y its results, that institution must show that it has made a good faith effort to recruit, hire and promote ualified women and minorities; and it must be able to produce records documenting these efforts.

If the best qualified person is white and male, that person can be hired. However, if called upon do so, the employer must be able to demonstrate that a genuine good faith effort has been made to recruit ualified women and minorities; that objective, job-related criteria were specified before the hiring process; and nat these criteria have been applied equally to women, minorities and white men.

SOURCE: National Center for Health Statistics, Personal Communication and Monthly Vital Statistics Report vol. 38, no. 3 , Supplement, June 29, 1989

TABLE 1-1

LIVE BIRTHS IN THE U.S. BY SEX: 1937-1987

YEAR	TOTAL	MALE	FEMALE
1937	2,203,337	1,130,641	1,072,696
1938	2,286,962	1,172,541	1,114,421
1939	2,265,558	1,162,600	1,102,988
1940	2,360,399	1,211,684	1,148,715
1941	2,513,427	1,289,734	1,223,693
1942	2,808,996	1,444,365	1,364,631
1943	2,936,860	1,508,959	1,427,901
1944	2,794,800	1,435,301	1,359,499
1945	2,735,456	1,404,587	1,330,869
1946	3,288,672	1,691,220	1,597,452
1947	3,699,940	1,899,876	1,800,064
1948	3,535,068	1,813,852	1,721,216
1949	3,559,529	1,826,352	1,733,177
1950	3,554,149	1,823,555	1,730,594
1951	3,750,850	1,923,020	1,827,830
1952	3,846,986	1,971,262	1,875,724
1953	3,902,120	2,001,798	1,900,322
1954	4,017,362	2,059,068	1,958,294
1955	4,047,295	2,073,719	1,973,576
1956	4,163,090	2,133,588	2,029,502
1957	4,254,784	2,179,960	2,074,824
1958	4,203,812	2,152,546	2,051,266
1959	4,244,796	2,173,638	2,071,158
1960	4,257,850	2,179,708	2,078,142
1961	4,268,326	2,186,274	2,082,052
1962	4,167,362	2,132,466	2,034,896
1963	4,098,020	2,101,632	1,996,388
1964	4,027,490	2,060,162	1,967,328
1965	3,760,358	1,927,054	1,833,304
1966	3,606,274	1,845,862	1,760,412
1967	3,520,959	1,803,388	1,717,571
1968	3,501,564	1,796,326	1,705,238
1969	3,600,206	1,846,572	1,753,634
1970	3,731,386	1,915,378	1,816,008
1971	3,555,970	1,822,910	1,733,060
1972	3,258,411	1,669,927	1,588,484
1973	3,136,965	1,608,326	1,528,639
1974	3,159,958	1,622,114	1,537,844
1975	3,144,198	1,613,135	1,531,063
1976	3,167,788	1,624,436	1,543,352
1977	3,326,632	1,705,916	1,620,716
1978	3,333,279	1,709,394	1,623,885
1979	3,494,398	1,791,267	1,703,131
1980	3,612,258	1,852,616	1,759,642
1981	3,629,238	1,860,272	1,768,966
1982	3,680,537	1,885,676	1,794,861
1983	3,638,933	1,865,553	1,773,380
1984	3,669,141	1,879,490	1,789,651
1985	3,760,561	1,927,983	1,832,578
1986	3,756,547	1,924,868	1,831,679
1987	3,809,394	1,951,153	1,858,241

SOURCE: 1980 Census of Population, Supplementary Report, May 1981, U.S. Dept. of Commerce, U.S. Bureau of the Census; Asian Americans: Growth, Change and Divesity, Population Reference Bureau, 1985; Special Report on Hispanics, 1987, Bureau of the Census, and personal communication, 1988.

TABLE 1-2

U.S. POPULATION, 1980 AND ESTIMATED 1986[1] AND COLLEGE ENROLLMENTS

	1980 U.S. Population No.	%	Current (1) U.S. Population No.	%	% of 20-24 Yr. Olds in Each Group in College in 1985
Total U.S.	226,610	100.0	241,752	100.0	24
White (2)	188,341	83.1	199,117	82.4	24
Black	26,488	11.7	28,930	12.0	20
Hispanic	14,604	6.4	18,790	7.8	16
Mexican	8,679	3.8	11,762	4.9	
Puerto Rican	2,005	0.9	2,284	0.9	
Cuban	806	0.4	1,017	0.4	
Central or South Am.		0.0	2,139	0.9	
Other	3,114	1.4	1,588	0.7	
Indian/Alaskan Native	1,418	0.6	1,507	0.6	
Asian/Pacific Islander	3,606	1.6	5,148	2.1	
Chinese	812	0.4	1,079	0.4	60
Filippino	782	0.3	1,052	0.4	27
Japanese	716	0.3	766	0.3	48
Vietnamese	245	0.1	634	0.3	42
Korean	357	0.2	543	0.2	40
Asian Indian	387	0.2	526	0.2	
Laotian	48	0.0	218	0.1	
Cambodian	16	0.0	161	0.1	
Hawaiian	172	0.1		0.0	
Samoan	40	0.0		0.0	
Guamanian	31	0.0		0.0	
Other		0.0	169	0.1	
Other Minority (3)	6,757	3.0	7,050	2.9	

(1) Data estimates are for various years from 1984 through 1988.
(2) Non-Hispanic. (3) Includes Nonresident Aliens.

SOURCE: 1986-87 Fact Book on Higher Education, American Council on Education

TABLE 1-3

18 YEAR OLDS BY SEX AND RACE, SELECTED YEARS, 1950-2050

Year	Population, Age 18[a] (in thousands)								
	All Races			Black & Other Races			Black		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
1950	2,164	1,090	1,074	271	133	138	b	b	b
1960	2,613	1,323	1,289	312	155	157	288	143	145
1970	3,781	1,914	1,868	512	254	259	463	229	234
1975	4,256	2,159	2,097	641	320	321	568	283	285
1976	4,266	2,164	2,101	646	323	323	570	284	286
1977	4,257	2,159	2,099	666	332	333	586	292	294
1978	4,247	2,157	2,090	670	335	335	588	292	295
1979	4,316	2,196	2,121	689	345	344	600	299	300
1980	4,256	2,165	2,090	697	350	347	601	300	300
1981	4,234	2,156	2,078	706	356	350	605	303	302
1982	4,188	2,140	2,049	712	361	351	606	306	301
	Series II Projections[c]								
1983	4,015	2,046	1,969	701	353	348	595	299	296
1984	3,774	1,926	1,848	672	339	333	569	286	283
1985	3,658	1,863	1,795	643	324	319	540	270	269
1990	3,431	1,752	1,679	634	319	315	517	260	257
1995	3,332	1,702	1,603	620	313	307	496	250	246
2000	3,751	1,916	1,836	773	391	382	613	309	304
2025	3,675	1,878	1,797	855	432	422	667	334	328
2050	3,650	1,865	1,784	920	465	455	688	348	341

[a] Total population, including armed forces overseas as of July 1.

[b] Source does not estimate population for "Negro" or "black," only "nonwhite."

[c] Series II projections use a fertility assumption of 1.9 lifetime births per woman. Projections reflect the results of the 1980 Census.

Sources: U.S. Bureau of the Census, *Current Population Reports,* Series P-25 (Washington: GPO), No. 311, p. 22; No. 519, table 1; No. 704, table 8; No. 721, table 1; No. 800, table 1; No. 870, table 1; No. 917, table 1; No. 922, table 2; No. 952, tables 5 and 6.

SOURCE: U.S. Bureau of the Census, National Center for Education Statistics, Commission on Professionals in Science and Technology

TABLE 1-4

PERCENTAGE OF FEMALES AND U.S. MINORITIES IN VARIOUS POPULATION GROUPS

	Female	White*	Black	Hispanic	Asian	Indian	Foreign
U.S. Population (1986)	51.8	77.5	12.0	7.8	2.1	0.6	
Elem/Second Enroll.(1984)	50.0	71.2	16.2	9.1	2.5	0.9	
H. S. Graduates (1986)	51.0	74.2	15.8	6.8	3.1	0.4	
Undergrad Enrollment (1986)	52.2	79.2	9.2	5.3	3.6	0.8	1.9
Graduate Enrollment (1986)	48.2	78.9	5.0	3.2	3.0	0.3	9.5
First Prof. Enroll. (1986)	33.6	88.4	4.7	2.6	2.7	0.4	1.2
Total Enrollment (1986)	50.1	79.3	8.6	5.0	3.6	0.7	2.7
Bachelor's Degrees (1987)	51.5	84.9	5.7	2.7	3.3	0.4	3.0
S/E BA/BS Degrees (1987)	39.0	82.5	5.2	2.8	5.0	0.4	4.1
Master's Degrees (1987)	51.2	79.1	4.8	2.4	3.0	0.4	10.3
S/E Master's Degrees (1987)	31.4	68.6	2.8	2.2	5.4	0.2	20.8
Ph.D. Degrees (1987)	35.2	71.8	3.1	2.2	3.2	0.3	19.4
S/E Ph.D. Degrees (1987)	26.1	67.0	1.7	1.9	4.2	0.2	25.1

*Non-Hispanic

Source: Digest of Education Statistics 1988 (CS 88-600), National Center for Education Statistics

TABLE 1-5

CHILDREN 3 TO 21 YEARS OLD IN SPECIAL EDUCATION PROGRAMS, BY TYPE OF HANDICAP: 1977 - 1987

Type of handicap	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87
1	2	3	4	5	6	7	8	9	10	11	12
	Number served,[1] in thousands										
All conditions	3,692	3,751	3,889	4,005	4,142	4,198	4,255	4,298	4,315	4,317	4,374
Learning disabled	796	964	1,130	1,276	1,462	1,622	1,741	1,806	1,832	1,862	1,914
Speech impaired	1,302	1,223	1,214	1,186	1,168	1,135	1,131	1,128	1,126	1,125	1,136
Mentally retarded	959	933	901	869	829	786	757	727	694	660	643
Seriously emotionally disturbed	283	288	300	329	346	339	352	361	372	375	383
Hard of hearing and deaf	87	85	85	80	79	75	73	72	69	66	65
Orthopedically handicapped	87	87	70	66	58	58	57	56	56	57	57
Other health impaired	141	135	105	106	98	79	50	53	68	57	52
Visually handicapped	38	35	32	31	31	29	28	29	28	27	26
Multihandicapped	—	—	50	60	68	71	63	65	69	86	97
Deaf-blind	—	—	2	2	3	2	2	2	2	2	2
	Percentage distribution of children served										
All conditions	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Learning disabled	21.6	25.7	29.1	31.9	35.3	38.6	40.9	42.0	42.4	43.1	43.8
Speech impaired	35.3	32.6	31.2	29.6	28.2	27.0	26.6	26.2	26.1	26.1	26.0
Mentally retarded	26.0	24.9	23.2	21.7	20.0	18.7	17.8	16.9	16.1	15.3	14.7
Seriously emotionally disturbed	7.7	7.7	7.7	8.2	8.4	8.1	8.3	8.4	8.6	8.7	8.8
Hard of hearing and deaf	2.4	2.3	2.2	2.0	1.9	1.8	1.7	1.7	1.6	1.5	1.5
Orthopedically handicapped	2.4	2.3	1.8	1.6	1.4	1.4	1.3	1.3	1.3	1.3	1.3
Other health impaired	3.8	3.6	2.7	2.6	2.4	1.9	1.2	1.2	1.6	1.3	1.2
Visually handicapped	1.0	0.9	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.6
Multihandicapped	—	—	1.3	1.5	1.6	1.7	1.5	1.5	1.6	2.0	2.2
Deaf-blind	—	—	0.1	(2)	0.1	(2)	(2)	0.1	(2)	(2)	(2)
	Number served as a percent of total enrollment[3]										
All conditions	8.33	8.61	9.14	9.62	10.11	10.46	10.73	10.92	10.98	10.93	10.97
Learning disabled	1.80	2.21	2.66	3.06	3.57	4.04	4.39	4.59	4.66	4.71	4.80
Speech impaired	2.94	2.81	2.85	2.85	2.85	2.83	2.85	2.87	2.87	2.85	2.85
Mentally retarded	2.16	2.14	2.12	2.09	2.02	1.96	1.91	1.85	1.77	1.67	1.61
Seriously emotionally disturbed	0.64	0.66	0.71	0.79	0.85	0.85	0.89	0.92	0.95	0.96	0.96
Hard of hearing and deaf	0.20	0.20	0.20	0.19	0.19	0.19	0.18	0.18	0.17	0.17	0.16
Orthopedically handicapped	0.20	0.20	0.16	0.16	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Other health impaired	0.32	0.31	0.25	0.25	0.24	0.20	0.13	0.13	0.17	0.14	0.13
Visually handicapped	0.09	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.07
Multihandicapped	—	—	0.12	0.14	0.17	0.18	0.16	0.17	0.17	0.22	0.24
Deaf-blind	—	—	0.01	0.01	0.01	(4)	0.01	0.01	(4)	0.01	(4)

[1] Includes students served under Chapter 1 and Education of the Handicapped Act.

[2] Less than .05.

[3] Based on the enrollment in public schools, kindergarten through 12th grade, including a relatively small number of prekindergarten students.

[4] Less than .005.

— Data not available.

NOTE. — Counts are based on reports from the 50 States and District of Columbia only (i.e., figures from U.S. territories are not included). Because of rounding, details may not add to totals. Some data have been revised from previously published figures.

CHART 1-1

PERCENT MINORITIES IN THE U.S.

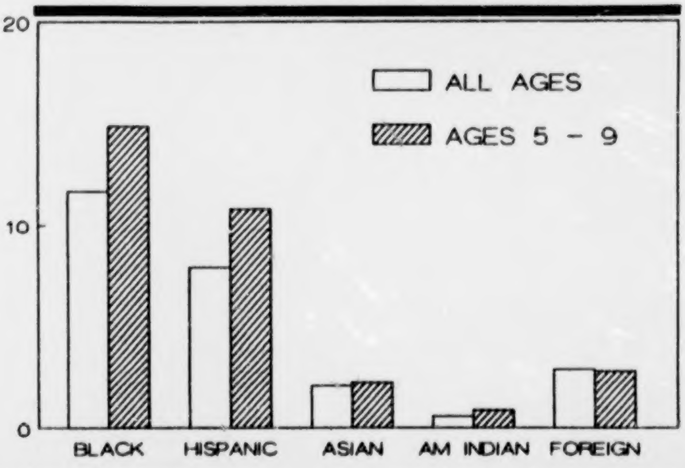


TABLE 1-6

ESTIMATES OF SCHOOL AGE (5-17) RESIDENT POPULATION BY SEX AND RACE, JULY 1960-1986

(In Thousands)

Year	Total			White[2]			Black[2]			Other races[2]		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
1	2	3	4	5	6	7	8	9	10	11	12	13
1960	44,176	22,437	21,739	38.366	19.532	18,832	5,366	2,677	2,690	446	228	217
1961	45,263	22.995	22,269	39,220	19.975	19,246	5,575	2,782	2,792	469	238	232
1962	46.648	23.706	22.941	40,352	20,560	19,791	5,802	2,897	2,906	496	251	244
1963	48,070	24.438	23,633	41,524	21,164	20,361	6,025	3,009	3,016	520	264	257
1964	49.509	25,174	24,336	42,692	21,765	20,929	6,272	3,135	3,137	545	275	270
1965	49,900	25,377	24,522	42,891	21,872	21,019	6,440	3,220	3,221	567	285	281
1966	50,681	25,784	24,898	43,469	22,176	21,293	6,619	3,308	3,311	594	300	295
1967	51,357	26,135	25,224	43,969	22,438	21,529	6,768	3,383	3,384	622	314	310
1968	51,974	26,456	25,517	44,422	22,677	21,744	6,903	3,453	3,450	649	325	323
1969	52,386	26,675	25,711	44,697	22,826	21,871	7,016	3,511	3,505	673	338	336
1970	52,593	26,793	25,801	44,783	22,877	21,906	7,108	3,561	3,547	703	355	349
1971	52,562	26,780	25,782	44,644	22.809	21,834	7,182	3,600	3,583	737	371	365
1972	52,316	26.658	25,658	44,336	22,655	21,681	7,211	3.615	3,596	768	388	380
1973	51,910	26,456	25,455	43,898	22,434	21,464	7,213	3,617	3,596	799	405	394
1974	51,498	26,249	25,249	43,454	22,210	21,244	7,213	3,618	3,596	830	420	409
1975	51,044	26,022	25,022	42,950	21,956	20,994	7,199	3,611	3,588	895	456	440
1976	50,633	25,822	24,811	42,477	21,721	20,755	7,208	3,617	3,591	948	483	465
1977	49,897	25,456	24,441	41,737	21,350	20,386	7,167	3,600	3,568	994	506	487
1978	49,038	25,024	24,013	40,883	20,919	19,964	7,116	3,576	3,540	1,039	530	509
1979	48,041	24,524	23,517	39,910	20,427	19,484	7,037	3,538	3,498	1,094	560	536
1980	47,236	24,139	23,098	39,003	19,982	19,020	6,997	3,523	3,472	1,237	634	605
1981	46,353	23,695	22,659	38,118	19,532	18,586	6.924	3,491	3,433	1,310	672	639
1982	45,654	23,345	22,307	37,399	19,167	18,231	6,879	3,472	3,408	1,375	706	668
1983	45,129	23,087	22,042	36,859	18,899	17,960	6,842	3,457	3,384	1,428	733	698
1984	44,943	23,000	21,942	36,596	18,770	17,826	6,847	3,464	3,384	1,499	767	731
1985	44,975	23,025	21,950	36,502	18,727	17,775	6,897	3,493	3,406	1,576	805	768
1986	45,143	23,120	22,024	36,534	18,746	17,787	6,959	3,528	3,431	1,651	847	806

[1] Includes persons 5 to 17 years of age.

[2] Includes persons of Hispanic origin.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-25, No. 519, No. 917, and No. 1000. (This table was prepared August 1987.)

TABLE 1-7

PERCENT OF THE POPULATION 3 TO 34 YEARS OLD ENROLLED IN SCHOOL BY RACE, SEX AND AGE, OCTOBER 1986

Sex and age	All races	White	Black	Hispanic origin[2]
1	2	3	4	5
Both sexes				
Total, 3 to 34 years	48.2	47.4	51.1	47.8
3 and 4 years	38.9	39.1	38.2	28.7
5 and 6 years	95.3	95.3	95.2	93.7
7 to 9 years	99.3	99.3	99.8	99.4
10 to 13 years	99.1	99.2	99.0	99.3
14 and 15 years	97.6	97.8	96.6	96.3
16 and 17 years	92.3	92.0	93.2	83.8
18 and 19 years	54.6	54.8	49.4	45.3
20 and 21 years	33.0	33.5	25.7	21.1
22 to 24 years	17.9	17.4	16.6	12.8
25 to 29 years	8.8	8.8	7.5	8.6
30 to 34 years	6.0	5.9	5.9	4.6
Male				
Total, 3 to 34 years	49.3	48.3	53.3	46.9
3 and 4 years	38.8	39.2	38.1	29.1
5 and 6 years	96.0	95.6	97.1	93.0
7 to 9 years	99.4	99.4	99.6	100.0
10 to 13 years	98.9	99.1	98.8	99.4
Male (continued)				
14 and 15 years	97.6	97.8	97.0	96.3
16 and 17 years	92.3	91.9	94.1	84.7
18 and 19 years	57.1	57.2	52.9	44.6
20 and 21 years	33.4	33.7	25.6	18.7
22 to 24 years	19.0	18.7	16.4	11.7
25 to 29 years	9.4	9.5	6.9	8.7
30 to 34 years	5.6	5.4	5.7	3.8
Female				
Total, 3 to 34 years	47.1	46.5	49.0	48.8
3 and 4 years	39.0	39.0	38.4	28.2
5 and 6 years	94.6	94.9	93.3	94.4
7 to 9 years	99.2	99.1	100.0	98.7
10 to 13 years	99.3	99.3	99.3	99.2
14 and 15 years	97.5	97.8	96.2	96.3
16 and 17 years	92.3	92.1	92.2	83.0
18 and 19 years	52.1	52.4	46.2	46.2
20 and 21 years	32.7	33.3	25.8	23.7
22 to 24 years	16.8	16.2	16.8	14.0
25 to 29 years	8.2	8.1	7.9	8.6
30 to 34 years	6.4	6.4	6.1	5.6

[1] Includes enrollment in any type of graded public, parochial, or other private school in regular school systems. Includes nursery schools, kindergartens, elementary schools, high schools, colleges, universities, and professional schools. Attendance may be on either a full-time or part-time basis and during the day or night. Enrollments in "special" schools, such as trade schools, business colleges, or correspondence schools, are not included.

[2] Persons of Hispanic origin may be of any race.

NOTE.—Data are based upon a sample survey of the civilian noninstitutional population.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, unpublished data. (This table was prepared October 1987.)

SOURCE: The Mathematics Report Card and The Science Report Card, Educational Testing Service, June 1988

TABLE 1-8

WEIGHTED PERCENTAGE OF U.S. 17 YEAR OLD STUDENTS WITH MATH PROFICIENCY AT OR ABOVE SET LEVELS

	Beginning Skills and Understanding			Basic Operations and Beginning Problem Solving			Moderately Complex Procedures and Reasoning			Multi-step Problem Solving and Algebra		
Score Level*	200			250			300			350		
Year	1977-78	1981-82	1985-86	1977-78	1981-82	1985-86	1977-78	1981-82	1985-86	1977-78	1981-82	1985-86
Total	99.8	99.9	99.9	92.1	92.9	96.0	51.4	48.3	51.1	7.4	5.4	6.4
Sex												
Male	99.9	99.9	99.9	93.0	93.9	96.5	54.9	51.9	54.2	9.5	6.7	8.2
Female	99.7	99.9	99.9	91.2	92.0	95.5	48.0	44.9	48.1	5.5	4.1	4.5
Ethnicity/Race												
White	100.0	100.0	99.9	95.8	96.3	98.3	57.3	54.5	58.0	8.6	6.3	7.6
Black	98.7	99.6	100.0	70.0	75.3	86.0	18.0	17.3	21.7	0.4	0.6	0.3
Hispanic	99.3	99.9	98.9	77.4	81.3	90.8	22.1	20.6	26.8	1.1	0.5	1.2

* Score at or above given number

TABLE 1-9

WEIGHTED PERCENTAGE OF U.S. 17 YEAR OLD STUDENTS WITH SCIENCE PROFICIENCY AT OR ABOVE SET LEVELS

	Beginning Skills and Understanding			Applies Basic Scientific Information			Analyzes Scientific Procedures and Data			Integrates Specialized Scientific Information		
Score Level*	200			250			300			350		
Year	1977-78	1981-82	1985-86	1977-78	1981-82	1985-86	1977-78	1981-82	1985-86	1977-78	1981-82	1985-86
Total	97.2	95.8	96.7	81.8	76.8	80.8	41.7	37.5	41.1	8.5	7.2	7.5
Sex												
Male	97.9	96.9	96.9	85.4	81.5	83.1	49.1	45.6	49.3	11.7	11.0	10.3
Female	96.6	94.8	96.6	78.3	72.4	78.5	34.4	29.8	33.8	5.3	3.7	4.7
Ethnicity/Race												
White	99.2	98.7	98.6	88.4	85.0	87.6	47.4	44.0	48.8	9.9	8.8	9.0
Black	92.7	86.1	92.9	61.7	46.6	61.6	19.1	12.5	15.5	2.0	1.4	0.5
Hispanic	84.5	81.0	89.8	40.9	36.5	52.9	8.3	6.7	12.3	0.6	0.1	1.0

* Score at or above given number

Source: Digest of Education Statistics 1988 (CS 88-600), National Center for Education Statistics

TABLE 1-10

HIGH SCHOOL GRADUATES COMPARED WITH POPULATION 17 YEARS OF AGE: 1869-70 - 1986-87 BY SEX AND CONTROL

(Numbers In Thousands)

School year	Population 17 years old[1]	High school graduates					Graduates as a percent of 17-year-old population
		Total[2]	Sex		Control		
			Men	Women	Public[3]	Private[4]	
1	2	3	4	5	6	7	8
1869-70	815	16	7	9	—	—	2.0
1879-80	946	24	11	13	—	—	2.5
1889-90	1,259	44	19	25	22	22	3.5
1899-1900	1,489	95	38	57	62	33	6.4
1909-10	1,786	156	64	93	111	45	8.8
1919-20	1,855	311	124	188	231	80	16.8
1929-30	2,296	667	300	367	592	75	29.0
1939-40	2,403	1,221	579	643	1,143	78	50.8
1947-48	2,261	1,190	563	627	1,073	117	52.6
1949-50	2,034	1,200	571	629	1,063	136	59.0
1951-52	2,086	1,197	569	627	1,056	141	57.4
1953-54	2,135	1,276	613	664	1,129	147	59.8
1955-56	2,242	1,415	680	735	1,252	163	63.1
1956-57	2,272	1,434	690	744	1,270	164	63.1
1957-58	2,325	1,506	725	781	1,332	174	64.8
1958-59	2,458	1,627	784	843	1,435	192	66.2
1959-60	2,672	1,858	895	963	1,627	231	69.5
1960-61	2,892	1,964	955	1,009	1,725	239	67.9
1961-62	2,768	1,918	938	980	1,678	240	69.3
1962-63	2,740	1,943	956	987	1,710	233	70.9
1963-64	2,978	2,283	1,120	1,163	2,008	275	76.7
1964-65	3,684	2,658	1,311	1,347	2,360	298	72.1
1965-66	3,489	2,665	1,323	1,342	2,367	298	76.4
1966-67	3,500	2,672	1,328	1,344	2,374	298	76.3
1967-68	3,532	2,695	1,338	1,357	2,395	300	76.3
1968-69	3,659	2,822	1,399	1,423	2,522	300	77.1
1969-70	3,757	2,889	1,430	1,459	2,589	300	76.9
1970-71	3,872	2,937	1,454	1,483	2,637	300	75.9
1971-72	3,973	3,001	1,487	1,514	2,699	302	75.5
1972-73	4,049	3,036	1,500	1,536	2,730	306	75.0
1973-74	4,132	3,073	1,512	1,561	2,763	310	74.4
1974-75	4,256	3,133	1,542	1,591	2,823	310	73.6
1975-76	4,272	3,148	1,552	1,596	2,837	311	73.7
1976-77	4,272	3,155	1,548	1,607	2,840	315	73.9
1977-78	4,286	3,127	1,531	1,596	2,825	302	73.0
1978-79	4,327	3,117	1,523	1,594	2,817	300	72.0
1979-80	4,262	3,043	1,491	1,552	2,748	295	71.4
1980-81	4,207	3,020	1,483	1,537	2,725	295	71.8
1981-82	4,121	2,995	1,471	1,524	2,705	290	72.7
1982-83	3,939	2,888	1,437	1,451	2,598	290	73.3
1983-84[5]	3,753	2,767	—	—	2,495	272	73.7
1984-85[5]	3,658	2,677	—	—	2,414	263	73.2
1985-86	3,621	2,642	—	—	2,382	260	73.0
1986-87[6]	3,696	2,693	—	—	2,428	265	72.9

[1] Derived from *Current Population Reports*, Series P-25, of the Bureau of the Census, U.S. Department of Commerce.

[2] Includes graduates of public and private schools.

[3] Data for 1929-30 and preceding years are from *Statistics of Public High Schools* and exclude graduates of high schools which failed to report to the Office of Education.

[4] For most years, private school data have been estimated based on periodic private school surveys. For years through 1957-58, private includes data for subcollegiate departments of institutions of higher education, and residential schools for exceptional children.

[5] Data have been revised from previously published figures.

[6] Estimated.

— Data not available.

NOTE. — Includes graduates of regular day school programs. Excludes graduates of other programs, when separately reported, and recipients of high school equivalency certificates. Some of the figures have been revised slightly since originally published.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Statistics of Public High Schools; Biennial Survey of Education in the United States; Statistics of State School Systems; Statistics of Nonpublic Elementary and Secondary Schools;* and Center for Education Statistics, unpublished data. (This table was prepared February 1988.)

Source: Digest of Education Statistics 1988 (CS 88-600), National Center for Education Statistics

TABLE 1-11

AVERAGE NUMBER OF CARNEGIE UNITS EARNED BY HIGH SCHOOL GRADUATES, BY STUDY AREA, SEX AND RACE, 1982

Characteristic	Total	English	Foreign language	Mathematics	Natural science	Social science	Arts	Business	Trade and industry	Other[1]
1	2	3	4	5	6	7	8	9	10	11
Average number of units	**21.0**	**3.7**	**1.0**	**2.5**	**1.9**	**2.8**	**1.4**	**1.7**	**.9**	**5.4**
Student characteristics										
Sex										
Male	20.8	3.6	.8	2.6	1.9	2.6	1.2	1.0	1.6	5.4
Female	21.2	3.7	1.2	2.5	1.9	2.6	1.5	2.4	.2	5.3
Race/ethnicity										
White, non-Hispanic	21.2	3.7	1.1	2.6	2.0	2.6	1.4	1.8	.8	5.2
Black, non-Hispanic	20.3	3.6	.7	2.4	1.6	2.5	1.2	1.7	.8	5.8
Hispanic	20.7	3.6	.8	2.2	1.5	2.5	1.2	1.6	1.1	6.1
Asian or Pacific Islander	21.7	3.6	1.9	3.1	2.4	2.5	1.2	1.1	.7	5.2
American Indian/Alaskan Native	20.6	3.5	.4	2.0	1.6	2.7	1.6	1.5	1.6	5.6

[1] Includes courses in architecture, computer and information sciences, health, home economics, industrial arts, personal and social development, philosophy, physical education, psychology, public affairs, and religion.

TABLE 1-12

HIGHEST EDUCATIONAL LEVEL AND DEGREE EARNED BY PERSONS AGE 18 AND OVER BY SEX, RACE AND AGE, SPRING 1984

(Numbers In Thousands)

Sex, race, and age	Total	Not high school graduate	High school graduate only	Some college, no degree	Vocational	Associate degree	Bachelor's degree	Master's degree	Professional degree	Doctor's degree
1	2	3	4	5	6	7	8	9	10	11
Total population, 18 and over	**170,232**	**44,324**	**60,358**	**30,301**	**3,105**	**5,768**	**18,069**	**5,795**	**1,744**	**768**
Men	80,834	20,448	26,407	15,444	1,023	2,804	9,581	3,110	1,432	585
Women	89,398	23,876	33,951	14,857	2,082	2,964	8,488	2,685	312	183
White, total	147,147	35,855	53,129	26,255	2,769	5,108	16,339	5,353	1,634	705
Men	70,276	16,606	23,270	13,444	919	2,498	8,703	2,923	1,355	558
Women	76,871	19,249	29,859	12,811	1,850	2,610	7,636	2,430	279	147
Black, total	18,475	7,133	6,043	3,229	254	482	963	286	53	32
Men	8,274	3,263	2,589	1,589	70	197	416	101	35	14
Women	10,201	3,870	3,454	1,640	184	285	547	185	18	18
Age										
18 to 24 years old	28,494	5,346	11,048	8,698	389	978	1,968	63	—	5
25 to 34 years old	40,474	5,770	14,973	8,231	806	2,099	6,353	1,585	509	147
35 to 44 years old	30,480	5,067	10,883	5,428	678	1,366	4,318	1,947	538	255
45 to 54 years old	22,264	5,883	8,959	2,832	455	662	2,109	993	249	123
55 to 64 years old	22,060	7,977	7,789	2,675	385	422	1,750	681	256	125
65 years old and over	26,458	14,281	6,706	2,436	391	241	1,570	526	193	114
	Percentage distribution, by highest degree earned									
Total population, 18 and over	**100.0**	**26.0**	**35.5**	**17.8**	**1.8**	**3.4**	**10.6**	**3.4**	**1.0**	**0.5**
Men	100.0	25.3	32.7	19.1	1.3	3.5	11.9	3.8	1.8	0.7
Women	100.0	26.7	38.0	16.6	2.3	3.3	9.5	3.0	0.3	0.2
White, total	100.0	24.4	36.1	17.8	1.9	3.5	11.1	3.6	1.1	0.5
Men	100.0	23.6	33.1	19.1	1.3	3.6	12.4	4.2	1.9	0.8
Women	100.0	25.0	38.8	16.7	2.4	3.4	9.9	3.2	0.4	0.2
Black, total	100.0	38.6	32.7	17.5	1.4	2.6	5.2	1.5	0.3	0.2
Men	100.0	39.4	31.3	19.2	0.8	2.4	5.0	1.2	0.4	0.2
Women	100.0	37.9	33.9	16.1	1.8	2.8	5.4	1.8	0.2	0.2
Age										
18 to 24 years old	100.0	18.8	38.8	30.5	1.4	3.4	6.9	0.2	(1)	(1)
25 to 34 years old	100.0	14.3	37.0	20.3	2.0	5.2	15.7	3.9	1.3	0.4
35 to 44 years old	100.0	16.6	35.7	17.8	2.2	4.5	14.2	6.4	1.8	0.8
45 to 54 years old	100.0	26.4	40.2	12.7	2.0	3.0	9.5	4.5	1.1	0.6
55 to 64 years old	100.0	36.2	35.3	12.1	1.7	1.9	7.9	3.1	1.2	0.6
65 years old and over	100.0	54.0	25.3	9.2	1.5	0.9	5.9	2.0	0.7	0.4

[1] Less than .05 percent.

— Data not available.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-70, No. 11, *Educational Background and Economic Status: Spring 1984*. (This table was prepared October 1987.)

NOTE.—Data are based on sample surveys of the civilian noninstitutional population. Because of rounding, details may not add to totals.

TABLE 1-13

SOURCE: "Educational Attainment in the United States", various years, Current Population Reports, Series P-20, U.S. Dept. of Commerce, Bureau of Census and The Condition of Education 1989, Vol. 2, National Center for Education Statistics (CS 89-651)

PERCENT OF POPULATION 25-34 WHO HAVE COMPLETED ONE OR MORE YEARS OF COLLEGE BY RACE AND ETHNICITY, 1970-1988

Year	One or More Years				Two or More Years				Four or More Years			
	ALL	WHITE	BLACK	HISPANIC	ALL	WHITE	BLACK	HISPANIC	ALL	WHITE	BLACK	HISPANIC
1970	29.8	31.2	15.0		24.3	25.4	11.7		15.8	16.6	6.1	
1971	31.3	32.8	16.3		25.2	26.5	12.2		16.3	17.2	6.3	
1972	33.3	34.8	18.7		27.0	28.2	13.9		17.9	18.8	7.9	
1973	34.2	35.5	20.4		27.8	29.0	14.6		18.2	19.0	7.9	
1974	37.4	38.7	23.0	18.7	30.7	32.0	16.0	13.8	20.0	21.0	8.1	5.7
1975	39.4	40.4	25.9	19.6	32.2	33.2	19.4	13.5	21.4	22.2	10.7	7.0
1976	41.3	42.7	24.9	20.9	33.8	35.0	18.9	14.7	22.6	23.5	11.3	7.4
1977	43.6	45.1	28.6	21.9	35.9	37.3	21.1	15.3	23.8	25.0	11.4	6.9
1978	44.8	46.1	32.6	22.7	36.8	38.1	24.1	16.9	23.6	24.8	11.4	8.8
1979	45.5	47.0	31.3	23.1	37.6	38.7	23.7	17.1	23.8	24.9	12.8	7.8
1980	45.8	47.2	33.6	23.6	36.8	38.9	24.9	17.8	24.1	25.4	12.4	8.9
1981	44.9	45.9	34.1	24.4	37.4	37.8	26.5	17.8	23.2	24.3	11.7	8.8
1982	45.2	46.2	35.8	23.8	38.4	38.4	27.3	18.7	23.8	24.9	12.6	9.7
1983	46.2	47.3	33.0	24.7	38.4	39.5	25.3	19.4	24.4	25.5	13.6	10.2
1984	45.7	47.1	32.8	26.0	37.7	39.1	24.7	19.7	24.3	25.5	13.1	10.1
1985	45.8	46.8	35.3	25.6	37.8	38.7	28.0	19.5	23.8	24.8	13.7	10.5
1986	45.7	46.6	36.2	24.9	37.0	38.9	28.5	19.5	24.0	25.1	13.6	9.9
1987	45.4	46.3	35.0	27.1	37.8	38.7	26.6	21.2	23.9	25.1	12.3	9.8
1988	44.8	45.6	34.1	29.0	37.4	38.1	26.9	22.5	23.7	24.5	13.1	11.9

SOURCE: Admissions Testing Program of the College Board

TABLE 1-14

SAT SCORE AVERAGES FOR COLLEGE-BOUND SENIORS BY SEX, 1970-89

Year	VERBAL Male	VERBAL Female	VERBAL Total	MATHEMATICS Male	MATHEMATICS Female	MATHEMATICS Total
1970	459	461	460	509	465	488
1971	454	457	455	507	466	488
1972	454	452	453	505	461	484
1973	446	443	445	502	460	481
1974	447	442	444	501	459	480
1975	437	431	434	495	449	472
1976	433	430	431	497	446	472
1977	431	427	429	497	445	470
1978	433	425	429	494	444	468
1979	431	423	427	493	443	467
1980	428	420	424	491	443	466
1981	430	418	424	492	443	466
1982	431	421	426	493	443	467
1983	430	420	425	493	445	468
1984	433	420	426	495	449	471
1985	437	425	431	499	452	475
1986	437	426	431	501	451	475
1987	437	425	431	499	452	475
1988	435	422	428	498	455	476
1989	434	421	427	500	454	476

Note: Scores range from 200 to 800.

TABLE 1-15

SAT SCORES OF INTENDED SCIENCE/ENGINEERING MAJORS, 1985, 1987 & 1988

Field	Percent of All 1985	1987	1988	% Male/Female 1985	1987	1988	SAT-Verbal 1985	1987	1988	Change 85-88	SAT-Math 1985	1987	1988	Change 85-88
Physical Sciences	1.7	1.3	1.3	69/41	70/30	68/32	504	507	500	-4	578	576	568	-10
Mathematics	1.1	0.7	0.6	49/51	52/48	52/48	456	475	468	12	588	602	596	8
Computer/Info Sci	7.1	3.4	3.0	63/37	65/35	63/37	409	403	400	-9	488	476	470	-18
Engineering	11.7	10.1	9.4	85/15	84/16	83/17	453	456	453	0	556	554	547	-9
Social Sci/History	8.1	9.9	10.9	48/52	35/65	35/65	463	465	459	-4	480	483	482	2
Biological Sciences	3.1	3.1	3.2	46/54	46/54	46/54	474	476	470	-4	519	517	514	-5
Agric/Nat Res.	1.0	1.2	1.2	67/33	58/42	59/41	394	416	414	20	429	446	447	18
All Test Takers							431	431	428	-3	475	475	476	1

SOURCE: Admissions Testing Program of the College Board

TABLE 1-16

S.A.T. SCORES BY RACE OR ETHNIC GROUP, 1976 - 1989

	ALL SCORES		WHITE		BLACK		ASIAN		AMER. INDIAN		MEXICAN AM.		PUERTO RICAN		OTHER HISPANIC		OTHER	
YEAR	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math
1976	431	472	451	493	332	354	414	518	388	420	371	410	364	401			410	458
1977	429	470	448	489	330	357	405	514	390	421	370	408	355	397			402	457
1978	429	468	446	485	332	354	401	510	387	419	370	402	349	388			399	450
1979	427	467	444	483	330	358	396	511	386	421	370	410	345	388			393	447
1980	424	466	442	482	330	360	396	509	390	426	372	413	350	394			394	449
1981	424	466	442	483	332	362	397	513	391	425	373	415	353	398			388	447
1982	426	467	444	483	341	366	398	513	388	424	377	416	360	403			392	449
1983	425	468	443	484	339	369	395	514	388	425	375	417	358	403			386	446
1984	426	471	445	487	342	373	398	519	390	427	376	420	358	405			368	450
1985	431	475	449	491	346	376	404	518	392	428	382	426	368	409			391	448
1987	430	476	447	489	351	377	405	521	393	432	379	424	360	400	387	432	405	453
1988	428	476	445	490	353	384	408	522	393	435	382	428	355	402	387	433	410	460
1989	427	476	446	491	351	386	409	525	384	428	381	430	360	406	389	436	414	467

Note: SAT scores were not available by ethnic group prior to 1976. In 1986, these data were not available due to changes in the student descriptive questionnaire (SDQ). In 1987, a category of "Other Hispanic" was added.

Source: American College Testing Program

TABLE 1-17

AVERAGE ACT SCORES BY SEX, RACE, AND ACADEMIC PREPARATION

	English			Mathematics			Social Studies			Natural Sciences			Composite		
	1978	1988	1989	1978	1988	1989	1978	1988	1989	1978	1988	1989	1978	1988	1989
Men	17.9	18.0	17.8	18.6	18.4	18.3	18.4	18.4	18.1	22.8	22.8	22.6	19.5	19.6	19.3
Women	18.9	19.0	18.9	16.1	16.1	16.1	16.7	16.6	16.4	20.1	20.2	20.0	18.1	18.1	18.0
Am. Indian	14.6	14.7	14.6	12.5	12.8	12.8	13.2	13.3	13.0	17.8	18.1	17.9	14.6	14.9	14.7
Asian	18.2	18.4	18.5	20.9	21.0	21.2	17.7	17.7	17.9	22.0	22.1	21.9	19.8	19.9	20.0
Black	14.4	14.5	14.4	11.0	11.3	11.6	12.1	12.2	12.0	15.7	15.9	15.7	13.4	13.6	13.6
Mexican-Am.	15.6	15.9	15.6	13.7	14.0	14.1	13.9	14.1	13.7	17.9	18.2	17.8	15.4	15.7	15.4
Other Hispanic	16.7	16.9	16.8	15.5	15.8	15.9	15.5	15.8	15.5	19.3	19.3	19.2	16.9	17.1	17.0
White	19.1	19.2	19.2	18.0	18.0	17.9	18.3	18.3	18.1	22.2	22.3	22.1	19.6	19.6	19.4
Compl. Core*	20.1	20.2	20.1	20.6	20.4	20.2	19.9	19.7	19.5	23.8	23.6	23.3	21.2	21.1	20.9
No Core*Compl.	17.5	17.4	17.0	15.2	14.8	14.6	16.1	15.9	15.4	19.9	19.8	19.5	17.3	17.1	16.7
All	**18.4**	**18.5**	**18.4**	**17.2**	**17.2**	**17.1**	**17.5**	**17.4**	**17.2**	**21.4**	**21.4**	**21.2**	**18.7**	**18.8**	**18.6**

*A Core curriculum includes at least four years of English and at least three years

SOURCE: Admissions Testing Program of the College Board

TABLE 1-18

SAT SCORES BY INTENDED COLLEGE MAJOR AND DEGREE LEVEL GOAL, 1988

	Number of SAT Takers	Percent	% Male/Female	SAT-V	SAT-
INTENDED COLLEGE MAJOR					
Agriculture/Natural Resources	13,966	1	59/41	414	447
Architecture/Environ. Design	30,283	3	62/38	418	483
Arts: Visual & Performing	62,408	6	39/61	433	451
Biological Sciences	36,565	3	46/54	470	514
Business & Commerce	242,534	23	49/51	407	462
Communications	51,275	5	36/64	447	461
Computer/Information Sciences	34,362	3	63/37	400	470
Education	70,186	7	22/78	407	442
Engineering	106,958	10	83/17	453	547
Foreign/Classical Languages	8,636	1	24/76	479	499
General/Interdisciplinary	5,843	1	41/59	498	520
Health & Allied Services	117,651	11	33/67	425	476
Home Economics	4,137	0	17/83	378	413
Language & Literature	12,627	1	36/64	526	515
Library & Archival Sciences	286	0	30/70	456	460
Mathematics	7,122	1	52/48	468	596
Military Sciences	9,714	1	83/17	428	473
Philosophy/Religion/Theology	2,819	0	58/42	472	501
Physical Sciences	15,112	1	68/32	500	568
Public Affairs & Services	23,537	2	48/52	388	416
Social Sciences & History	123,483	12	35/65	459	482
Technical & Vocational	17,489	2	58/42	364	406
Undecided	53,759	5	53/47	424	471
DEGREE-LEVEL GOAL					
Certificate Program	19,877	2	47/53	363	402
Associate Degree	22,872	2	37/63	354	379
Bachelor's Degree	309,580	30	49/51	406	451
Master's Degree	275,206	27	48/52	446	499
Doctoral/Related Degree	180,876	18	46/54	480	531
Other	9,556	1	45/55	358	401
Undecided	214,595	21	46/54	423	467

TABLE 1-19

ACADEMIC PREPARATION IN HIGH SCHOOL OF STUDENTS TAKING SAT IN 1988

Percent of students taking at least...	Female	Male	Average Years of Study	
			Female	Male
4 years English	88%	86%	4.0	4.0
4 years Math	60%	68%	3.6	3.8
3 years Social Sciences and History	84%	83%	3.3	3.3
2 years Foreign Language	88%	82%	2.6	2.4
3 years Natural Science	73%	79%	3.1	3.3
1 year Arts or Music	72%	63%	1.8	1.5

SOURCE: Digest of Education Statistics 1988, National Center for Education Statistics

TABLE 1-20

COLLEGE ENROLLMENT RATES OF RECENT HIGH SCHOOL GRADUATES, BY SEX AND RACE, 1960 - 1986

[Numbers in thousands]

Year	Total high school graduates			Enrolled in college[1]					
	Total	Males	Females	Total		Males		Females	
				Number	Percent	Number	Percent	Number	Percent
1	2	3	4	5	6	7	8	9	10
1960	1,679	756	923	758	45.1	408	54.0	350	37.9
1961	1,763	790	973	847	48.0	445	56.3	402	41.3
1962	1,838	872	966	900	49.0	480	55.0	420	43.5
1963	1,741	794	947	784	45.0	415	52.3	369	39.0
1964	2,145	997	1,148	1,037	48.3	570	57.2	467	40.7
1965	2,659	1,254	1,405	1,354	50.9	718	57.3	636	45.3
1966	2,612	1,207	1,405	1,309	50.1	709	58.7	600	42.7
1967	2,525	1,142	1,383	1,3[illegible]	51.9	658	57.6	653	47.2
1968	2,606	1,184	1,422	1,444	55.4	748	63.2	696	48.9
1969	2,842	1,352	1,490	1,516	53.3	812	60.1	704	47.2
1970	2,757	1,343	1,414	1,427	51.8	741	55.2	686	48.5
1971	2,872	1,369	1,503	1,535	53.4	788	57.6	747	49.7
1972	2,961	1,420	1,541	1,457	49.2	749	52.7	708	45.9
1973	3,059	1,458	1,601	1,425	46.6	730	50.1	695	43.4
1974	3,101	1,491	1,610	1,474	47.5	736	49.4	738	45.8
1975	3,186	1,513	1,673	1,615	50.7	796	52.6	819	49.0
1976	2,987	1,450	1,537	1,458	48.8	685	47.2	773	50.3
1977	3,140	1,482	1,658	1,590	50.6	773	52.2	817	49.3
1978	3,161	1,485	1,676	1,584	50.1	758	51.0	826	49.3
1979	3,160	1,474	1,686	1,559	49.3	743	50.4	816	48.4
1980	3,089	1,500	1,589	1,524	49.3	701	46.7	823	51.8
1981	3,053	1,490	1,563	1,646	53.9	816	54.8	830	53.1
1982	3,100	1,508	1,592	1,568	50.6	739	49.0	829	52.1
1983	2,964	1,390	1,574	1,562	52.7	721	51.9	841	53.4
1984	3,012	1,429	1,583	1,662	55.2	800	56.0	862	54.5
1985	2,666	1,286	1,380	1,539	57.7	754	58.6	785	56.9
1986	2,786	1,331	1,455	1,499	53.8	744	55.9	756	51.9

Year	High school graduates				Enrolled in college[1]							
	Total	White[2]	Black[2]	Hispanic[3]	Total		White[2]		Black[2]		Hispanic[3]	
					Number	Percent	Number	Percent	Number	Percent	Number	Percent
1	2	3	4	5	6	7	8	9	10	11	12	13
1960	1,679	1,565	—	—	758	45.1	717	45.8	—	—	—	—
1961	1,763	1,612	—	—	847	48.0	798	49.5	—	—	—	—
1962	1,838	1,660	—	—	900	49.0	840	50.6	—	—	—	—
1963	1,741	1,615	—	—	784	45.0	736	45.6	—	—	—	—
1964	2,145	1,964	—	—	1,037	48.3	967	49.2	—	—	—	—
1965	2,659	2,417	—	—	1,354	50.9	1,249	51.7	—	—	—	—
1966	2,612	2,403	—	—	1,309	50.1	1,243	51.7	—	—	—	—
1967	2,525	2,267	—	—	1,311	51.9	1,202	53.0	—	—	—	—
1968	2,606	2,303	—	—	1,444	55.4	1,304	56.6	—	—	—	—
1969	2,842	2,538	—	—	1,516	53.3	1,402	55.2	—	—	—	—
1970	2,757	2,461	—	—	1,427	51.8	1,280	52.0	—	—	—	—
1971	2,872	2,596	—	—	1,535	53.4	1,402	54.0	—	—	—	—
1972	2,961	2,614	—	—	1,457	49.2	1,292	49.4	—	—	—	—
1973	3,059	2,707	—	—	1,425	46.6	1,302	48.1	—	—	—	—
1974	3,101	2,738	—	—	1,474	47.5	1,288	47.1	—	—	—	—
1975	3,186	2,825	—	—	1,615	50.7	1,446	51.2	—	—	—	—
1976	2,987	2,640	320	152	1,458	48.8	1,291	48.9	134	41.9	80	52.6
1977	3,140	2,768	335	156	1,590	50.6	1,403	50.7	166	49.6	80	51.3
1978	3,161	2,750	352	133	1,584	50.1	1,378	50.1	161	45.7	57	42.9
1979	3,160	2,778	324	154	1,559	49.3	1,378	49.6	147	45.4	69	44.8
1980	3,089	2,682	361	129	1,524	49.3	1,339	49.9	151	41.8	68	52.7
1981	3,053	2,628	359	146	1,646	53.9	1,434	54.6	154	42.9	76	52.1
1982	3,100	2,644	384	174	1,568	50.6	1,376	52.0	140	36.5	75	43.1
1983	2,964	2,496	392	138	1,562	52.7	1,372	55.0	151	38.5	75	54.3
1984	3,012	2,514	438	185	1,662	55.2	1,455	57.9	176	40.2	82	44.3
1985	2,666	2,241	333	141	1,539	57.7	1,332	59.4	141	42.3	72	51.1
1986	2,786	2,307	386	169	1,499	53.8	1,292	56.0	141	36.5	75	44.4

[1] Enrollment in college as of October of each year for individuals age 16 to 24 who graduated from high school during the preceding 12 months.

[2] Includes persons of Hispanic origin.

[3] Due to the small sample size, data for Hispanics are subject to relatively large amounts of sampling error.

—Data not available.

NOTE.—Data based on sample surveys of the civilian population.

SOURCE: American College Testing Program, unpublished tabulations, 1987. Data are derived from statistics collected by the U.S. Department of Labor. (This table was prepared August 1987.)

Source: The **Chronicle of Higher Education Almanac**, September 6, 1989

TABLE 1-21

EDUCATIONAL ATTAINMENT OF 1980 HIGH SCHOOL SENIORS BY 1986, BY SEX AND RACE

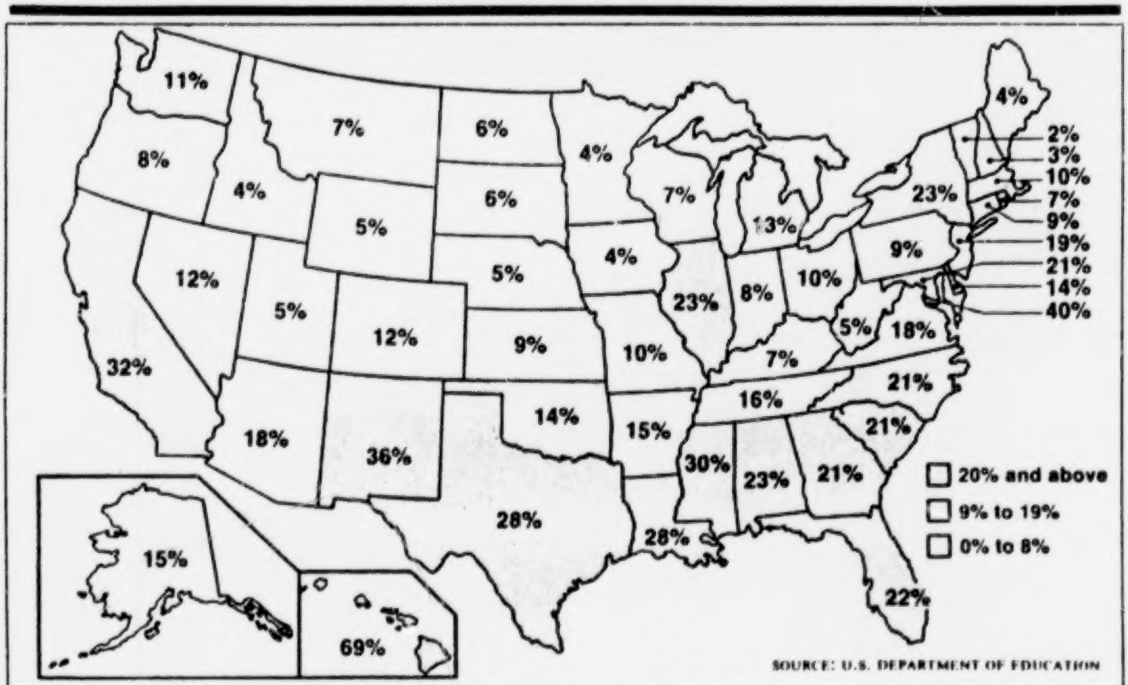
	No high-school diploma	High-school diploma	License	Associate degree	Bachelor's degree	Professional/graduate degree
Sex						
Men	1.0%	64.0%	10.5%	5.9%	17.6%	0.9%
Women	0.8	59.6	13.3	7.0	18.8	0.6
Racial and ethnic group						
American Indian	—	61.3	18.6	9.3	10.8	—
Asian	—	49.6	12.6	8.7	27.3	1.7
Black, non-Hispanic	1.2	69.4	13.9	5.3	9.9	0.2
Hispanic	1.7	70.2	13.8	7.3	6.8	0.1
White, non-Hispanic	0.8	60.0	11.5	6.6	20.2	0.9
Socioeconomic status						
Low	1.2	74.1	12.3	5.5	6.6	0.2
Low-middle	0.5	66.7	13.6	8.0	11.1	0.2
High-middle	0.1	58.4	12.9	7.7	20.4	0.6
High	—	45.7	8.7	6.3	37.1	2.2

Note: Figures are based on data from "High School and Beyond," a longitudinal study of more than 10,500 students who were high-school seniors in 1980. They show students' highest level of education achieved by the spring of 1986. Because of rounding, figures may not add to 100 per cent. A dash indicates less than 0.5 per cent.

SOURCE: U.S. DEPARTMENT OF EDUCATION

CHART 1-2

PROPORTION OF COLLEGE STUDENTS WHO ARE MEMBERS OF MINORITY GROUPS, FALL 1986



SOURCE: U.S. DEPARTMENT OF EDUCATION

TABLE 1-22

COLLEGE ENROLLMENT AND LABOR FORCE STATUS OF 1985 AND 1986 HIGH SCHOOL GRADUATES 16 TO 24, BY SEX AND RACE/ETHNICITY, OCTOBER 1985 AND OCTOBER 1986

[Numbers in thousands]

Item	Civilian noninstitutional population			Civilian labor force[1]			Unemployed	
	Number	Percent	Percent of high school graduates	Number	Labor force participation rate	Employed	Number	Unemployment rate
1	2	3	4	5	6	7	8	9
1985 high school graduates[2] Total	**2,666**	**100.0**	**100.0**	**1,610**	**60.4**	**1,292**	**318**	**19.8**
Men	1,286	48.2	48.2	785	61.0	626	159	20.3
Women	1,380	51.8	51.8	825	59.8	666	159	19.3
White[3]	2,241	84.1	84.1	1,383	61.7	1,177	206	14.9
Black[3]	333	12.5	12.5	191	57.4	95	96	50.3
Hispanic origin[4]	141	5.3	5.3	86	61.0	61	25	29.1
Enrolled in college, October 1985	1,539	100.0	57.7	683	44.4	593	90	13.2
Men	754	49.0	58.6	327	43.4	280	47	14.4
Women	785	51.0	56.9	356	45.4	313	43	12.1
Full-time students	1,418	92.1	53.2	577	40.7	494	83	14.4
Part-time students	122	7.9	4.6	106	86.9	99	7	6.6
White[3]	1,332	86.5	59.4	620	46.5	552	68	11.0
Black[3]	141	9.2	42.3	44	31.2	29	15	(5)
Hispanic origin[4]	72	4.7	51.1	37	(5)	32	5	(5)
Not enrolled in college, October 1985	1,127	100.0	42.3	927	82.3	699	228	24.6
Men	532	47.2	41.4	458	86.1	346	112	24.5
Women	595	52.8	43.1	469	78.8	353	116	24.7
White[3]	909	80.7	40.6	763	83.9	625	138	18.1
Black[3]	192	17.0	57.7	147	76.6	66	81	56.1
Hispanic origin[4]	69	6.1	48.9	49	(5)	29	20	(5)
1986 high school graduates[6] Total	**2,786**	**100.0**	**100.0**	**1,764**	**63.3**	**1,462**	**302**	**17.1**
Men	1,331	47.8	47.8	887	66.6	748	139	15.7
Women	1,456	52.2	52.2	877	60.3	714	163	18.6
White[3]	2,307	82.8	82.8	1,512	65.5	1,288	224	14.8
Black[3]	386	13.9	13.9	208	53.9	136	72	34.6
Hispanic origin[4]	169	6.1	6.1	109	64.5	91	18	16.5
Enrolled in college, October 1986	1,499	100.0	53.8	717	47.8	623	94	13.1
Men	744	49.6	55.9	381	51.2	340	41	10.8
Women	755	50.4	51.9	336	44.5	283	53	15.8
Full-time students	1,365	91.1	49.0	599	43.9	522	77	12.9
Part-time students	134	8.9	4.8	118	88.1	101	17	14.4
White[3]	1,292	86.2	56.0	651	50.4	569	82	12.6
Black[3]	141	9.4	38.5	41	29.1	32	8	(5)
Hispanic origin[4]	75	5.0	44.4	33	44.0	30	3	(5)
Not enrolled in college, October 1986	1,287	100.0	46.2	1,047	81.4	839	208	19.9
Men	587	45.6	44.1	506	86.2	408	98	19.4
Women	700	54.4	48.1	541	77.3	431	110	20.3
White[3]	1,015	78.9	44.0	861	84.8	719	142	16.5
Black[3]	245	19.0	63.5	167	68.2	103	64	38.3
Hispanic origin[4]	94	7.3	56.6	76	80.9	61	15	19.7

---

[1] The labor force includes all employed persons plus those seeking employment. The labor force participation rate is the percentage of persons either employed or seeking employment.

[2] Includes persons who graduated from high school between October 1984 and October 1985.

[3] Includes persons of Hispanic origin.

[4] Persons of Hispanic origin may be of any race.

[5] Data not shown where base is less than 75,000.

[6] Includes persons who graduated from high school between October 1985 and October 1986.

NOTE.—Data are based upon sample surveys of the civilian noninstitutional population. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, *Employment of School-Age Youth, Graduates, and Dropouts*, October 1985 and October 1986, and "Nearly Half of College Freshmen Also Hold a Job or Are Looking for One," June 1987. (This table was prepared June 1987.)

Source: Digest of Education Statistics 1988 (CS 88-600), National Center for Education Statistics

TABLE 1-23

FIRST TIME FRESHMEN AND TOTAL ENROLLMENT IN HIGHER EDUCATION BY SEX AND ATTENDANCE STATUS, FALL 1965-1987

Year	Total, all freshmen	Men			Women		
		Total	Full-time	Part-time	Total	Full-time	Part-time
1	2	3	4	5	6	7	8
1965[1]	1,442	829	—	—	613	—	—
1966	1,554	890	—	--	665	—	—
1967	1,641	931	761	170	710	574	136
1968	1,893	1,082	847	235	810	624	187
1969	1,967	1,118	876	242	849	649	200
1970	2,063	1,152	896	256	911	691	221
1971	2,119	1,171	896	275	949	710	238
1972	2,153	1,158	858	299	995	716	279
1973	2,226	1,182	867	315	1,044	740	304
1974	2,366	1,244	896	348	1,122	777	345
1975	2,515	1,328	942	386	1,187	821	366
1976	2,347	1,170	855	316	1,177	808	369
1977	2,394	1,156	840	316	1,239	841	398
1978	2,390	1,142	817	324	1,248	834	414
1979	2,503	1,180	840	340	1,323	866	457
1980	2,588	1,219	862	357	1,369	887	481
1981	2,595	1,218	852	366	1,378	886	492
1982	2,505	1,199	837	362	1,306	851	456
1983	2,444	1,159	825	334	1,285	853	431
1984	2,357	1,112	786	326	1,245	827	418
1985	2,292	1,076	775	301	1,216	827	389
1986[3]	2,214	1,045	767	278	1,169	817	352

Year	Total enrollment	Attendance status		Sex of student	
		Full-time	Part-time	Men	Women
	2	3	4	5	6
1965	5,920,864	3,969,596	[1]1,951,268	3,630,020	2,290,844
1966	6,389,872	4,438,606	[1]1,951,266	3,856,216	2,533,656
1967	6,911,748	4,793,128	[1]2,118,620	4,132,800	2,778,948
1968	7,513,091	5,210,155	2,302,936	4,477,649	3,035,442
1969	8,004,660	5,498,883	2,505,777	4,746,201	3,258,459
1970	8,580,887	5,815,290	2,765,597	5,043,642	3,537,245
1971	8,948,644	6,077,232	2,871,412	5,207,004	3,741,640
1972	9,214,860	6,072,389	3,142,471	5,238,757	3,976,103
1973	9,602,123	6,189,493	3,412,630	5,371,052	4,231,071
1974	10,223,729	6,370,273	3,853,456	5,622,429	4,601,300
1975	11,184,859	6,841,334	4,343,525	6,148,997	5,035,862
1976	11,012,137	6,717,058	4,295,079	5,810,828	5,201,309
1977	11,285,787	6,792,925	4,492,862	5,789,016	5,496,771
1978	11,260,092	6,667,657	4,592,435	5,640,998	5,619,094
1979	11,569,899	6,794,039	4,775,860	5,682,877	5,887,022
1980	12,096,895	7,097,958	4,998,937	5,874,374	6,222,521
1981	12,371,672	7,181,250	5,190,422	5,975,056	6,396,616
1982	12,425,780	7,220,618	5,205,162	6,031,384	6,394,396
1983	12,464,661	7,261,050	5,203,611	6,023,725	6,440,936
1984	12,241,940	7,098,388	5,143,552	5,863,574	6,378,366
1985	12,247,055	7,075,221	5,171,834	5,818,450	6,428,605
1986[2]	12,500,798	7,116,503	5,384,295	5,885,445	6,615,353
1987[3]	12,544,000	7,219,000	5,325,000	5,881,000	6,663,000

[1] Excludes first-time freshmen in occupational programs not creditable towards a bachelor's degree.

[2] Data for 2-year branches of 4-year college systems are aggregated with the 4-year institutions.

[3] Preliminary data.

— Data not available.

NOTE. — Alaska and Hawaii are included in all years. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*, various years; and Center for Education Statistics, "Fall Enrollment in Colleges and Universities" surveys. (This table was prepared March 1988.)

SOURCE: The American Freshman: National Norms for Fall 1971 through 1988, American Council on Education, Office of Research and Cooperative Institutional Research Program, American Council on Education, University of California at Los Angeles

TABLE 1-24

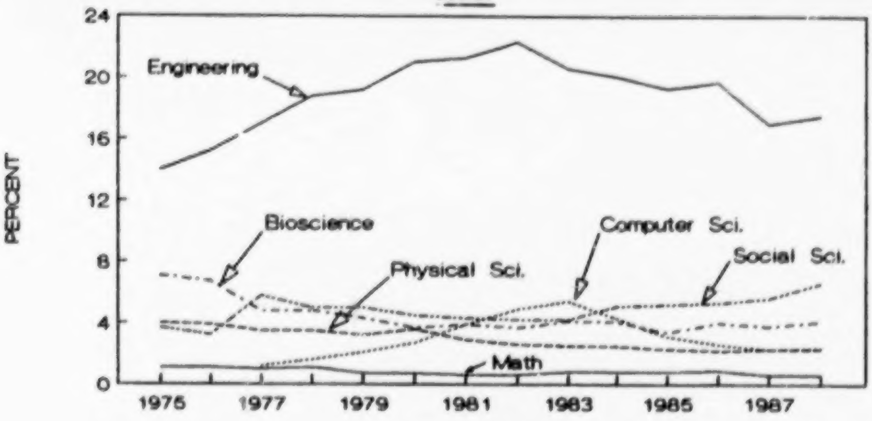
RACIAL BACKGROUND OF FRESHMEN IN ALL INSTITUTIONS OF HIGHER EDUCATION, SELECTED YEARS, 1971-88

	WHITE		BLACK		AM INDIAN		ASIAN		MEX AMER		PUERTO RICAN		OTHER	
YEAR	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
1971	92.1	90.6	5.5	7.2	1.0	0.9	0.5	0.4	1.1	1.1	0.2	0.2	1.2	1.1
1973	89.1	87.9	7.0	8.6	0.8	1.0	1.2	1.0	1.3	1.2	0.5	0.4	1.5	1.5
1975	87.2	85.6	8.0	10.1	0.9	0.8	1.6	1.3	1.8	1.6	0.7	0.6	2.1	1.7
1977	87.9	86.0	7.8	9.8	0.8	0.7	1.2	1.0	1.4	1.4	0.9	1.0	1.9	1.6
1979	87.2	85.4	8.2	10.1	1.0	1.0	1.6	1.2	1.1	1.2	1.1	1.0	2.2	1.8
1981	89.5	87.6	7.5	9.6	1.1	1.0	1.2	1.0	0.9	0.9	0.6	0.6	1.8	1.2
1983	88.0	85.9	7.8	10.1	1.0	1.1	1.7	1.4	0.9	0.9	0.7	0.7	1.8	1.5
1984	86.9	84.6	8.6	10.9	1.0	0.9	1.8	1.5	0.9	1.1	0.8	0.8	1.7	1.7
1985	87.3	87.3	8.1	10.0	1.0	1.1	2.1	1.8	1.0	1.4	0.6	0.7	1.5	1.5
1986	86.9	86.9	7.3	9.6	0.9	0.8	2.8	2.3	1.2	1.3	0.8	0.9	1.9	2.0
1987	87.6	84.5	7.2	10.0	0.9	0.9	2.6	2.1	0.9	1.1	0.9	1.5	1.6	1.7
1988	84.7	81.8	8.0	10.7	0.8	0.8	3.2	2.5	1.5	2.0	1.2	1.5	2.2	2.2

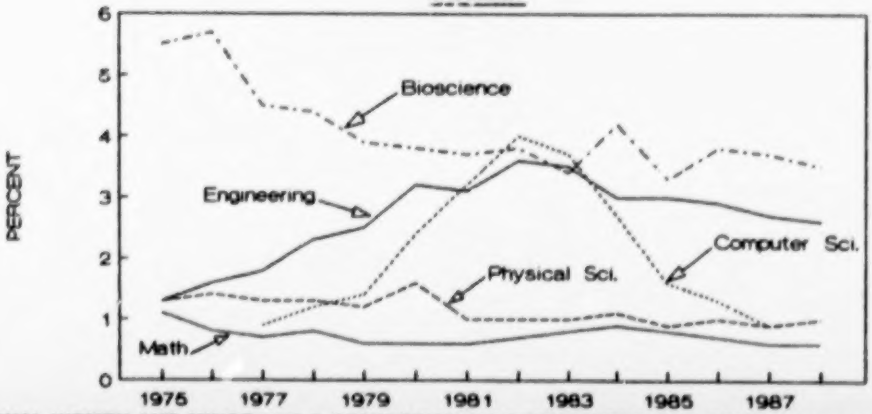
CHART 1-3

FRESHMEN PLANNING TO MAJOR IN SCIENCE OR ENGINEERING

MEN



WOMEN



SOURCE: The American Freshman: National Norms for Fall 1973 through 1988, American Coucil on Education, Office of Research and Cooperative Institutional Research Program, American Council on Education, University of California, Los Angeles

TABLE 1-25

PERCENTAGE DISTRIBUTION OF FRESHMEN BY PROBABLE MAJOR FIELD OF STUDY IN ALL INSTITUTIONS OF HIGHER EDUCATION, SELECTED YEARS, 1975 - 1988

Probable Major Field of Study	Men														
	1973	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Arts & Humanities	10.1	12.7	12.4	7.5	7.4	7.5	6.4	7.4	6.8	6.8	6.6	7.1	7.4	8.7	8.0
Biological Sciences	8.2	7.1	6.7	4.8	4.8	4.3	3.7	3.9	3.7	4.1	4.1	3.4	4.0	3.8	4.1
Agriculture/Forestry	4.4	5.7	5.3	5.4	4.5	4.5	4.1	5.0	3.8	2.9	3.3	3.2	2.8	2.6	2.4
Business	21.1	20.0	22.5	23.8	25.0	25.1	22.9	22.7	22.3	22.7	25.1	25.7	26.6	28.6	27.6
Education	5.2	4.6	4.5	3.8	3.3	3.6	3.3	2.9	2.4	2.9	2.8	3.3	3.8	4.0	3.8
Engineering	12.1	14.0	15.2	17.0	18.8	19.2	21.0	21.3	22.3	20.6	20.1	19.3	19.7	17.0	17.5
Physical Sciences	4.2	4.0	3.9	3.5	3.5	3.2	3.6	2.9	2.6	2.5	2.5	2.3	2.2	2.3	2.3
Mathematics/Statistics	1.8	1.1	1.1	1.0	1.1	0.7	0.7	0.6	0.6	0.8	0.8	0.8	0.9	0.6	0.6
Computer Science				1.2	1.6	2.1	2.7	3.9	4.9	5.4	4.3	3.1	2.6	2.3	2.4
Health Prof (non-M.D.)	4.6	1.8	1.5	2.3	2.0	1.9	1.9	1.7	1.6	2.1	2.3	2.0	2.0	1.9	2.5
Premed, Predent, Prevet.				3.8	4.0	3.6	3.6	3.1	3.2	3.3	3.2	3.1	2.9	2.5	2.6
Social Sciences*	5.5	3.7	3.2	5.8	5.0	5.0	4.5	4.3	4.2	4.2	5.1	5.2	5.3	5.6	6.6
Other Fields (Technical)	8.4	10.3	8.6	8.7	7.0	8.6	8.5	9.9	9.7	9.9	7.7	7.5	6.4	6.5	3.7
Other Fields (Non-Tech)	7.1	10.2	11.2	7.4	8.1	6.8	9.3	6.4	8.2	8.1	8.0	9.0	10.0	8.1	9.6
Undecided	4.5	4.6	4.3	4.0	3.9	3.9	3.8	3.9	3.7	4.0	4.1	4.7	5.4	5.4	5.9
	Women														
Arts & Humanities	15.0	12.8	12.7	11.1	10.6	10.7	10.1	10.5	9.7	9.0	8.8	9.8	10.0	10.8	10.3
Biological Sciences	5.7	5.5	5.7	4.5	4.4	3.9	3.8	3.7	3.8	3.4	4.2	3.3	3.8	3.7	3.5
Agriculture/Forestry	1.0	1.9	2.0	2.0	2.0	1.7	1.8	2.2	1.4	0.9	1.0	1.0	1.7	0.8	1.0
Business	14.0	17.5	19.2	21.1	23.1	23.1	24.5	25.0	25.7	26.0	27.5	27.5	27.0	26.0	24.0
Education	19.6	15.5	14.3	13.6	12.1	12.5	11.6	10.8	9.0	8.9	9.6	10.4	12.1	13.3	13.9
Engineering	0.7	1.3	1.6	1.8	2.3	2.5	3.2	3.1	3.6	3.5	3.0	3.0	2.9	2.7	2.6
Physical Sciences	1.1	1.3	1.4	1.3	1.3	1.2	1.6	1.0	1.0	1.0	1.1	0.9	1.0	0.9	1.0
Mathematics/Statistics	1.6	1.1	0.8	0.7	0.8	0.6	0.6	0.6	0.7	0.8	0.9	0.8	0.7	0.6	0.6
Computer Science				0.9	1.2	1.4	2.4	3.2	4.0	3.7	2.7	1.6	1.3	0.9	1.0
Health Prof (non-M.D.)	16.5	13.2	12.4	15.5	14.6	13.4	13.3	13.1	17.8	14.9	13.8	8.9	9.9	9.4	9.8
Premed, Predent, Prevet.				2.8	2.9	2.9	3.2	2.9	3.0	3.2	3.1	3.2	2.9	2.5	3.0
Social Sciences*	11.7	8.9	8.2	9.9	9.5	9.6	8.6	7.9	7.2	7.6	8.4	9.6	10.2	10.5	12.1
Other Fields (Technical)	2.0	6.7	6.5	2.3	2.0	2.7	2.9	4.0	4.3	3.8	2.4	2.4	1.9	1.7	1.3
Other Fields (Non-Tech)	3.5	8.8	10.3	13.4	7.9	7.6	6.9	6.9	3.3	7.1	7.6	8.1	7.9	8.4	8.2
Undecided	4.9	5.5	5.1	5.3	5.3	5.6	5.5	5.4	5.5	5.7	6.2	6.9	7.5	7.6	7.6
	All														
Arts & Humanities	13.8	12.6	12.4	9.5	9.0	9.2	8.9	8.9	8.2	7.9	7.7	8.3	9.0	10.0	9.3
Biological Sciences	7.0	6.3	6.2	4.7	4.6	4.0	3.7	3.7	3.7	3.8	4.2	3.4	3.9	3.8	3.7
Agriculture/Forestry	2.8	3.9	3.6	3.6	3.1	3.0	2.9	3.5	2.6	1.9	2.0	2.0	1.8	1.7	1.7
Business	17.7	18.9	20.9	22.2	23.3	24.3	23.9	23.7	24.2	24.4	26.4	26.8	26.9	27.0	25.6
Education	12.2	9.9	9.3	8.8	8.0	8.4	7.7	7.1	6.0	6.0	6.5	7.1	8.1	8.9	9.3
Engineering	6.6	7.9	8.5	9.3	10.3	10.6	11.8	12.0	12.6	11.7	11.0	10.7	10.9	9.4	9.5
Physical Sciences	2.7	2.7	2.7	2.3	2.4	2.3	2.0	2.1	1.9	1.8	1.8	1.6	1.7	1.6	1.5
Mathematics/Statistics	1.7	1.1	1.0	0.8	0.9	0.6	0.6	0.6	0.6	0.8	0.8	0.8	0.7	0.6	0.6
Computer Science				1.0	1.4	1.8	2.5	3.5	4.4	4.5	3.4	2.3	1.9	1.6	1.7
Health Prof (non-M.D.)	10.4	7.3	6.9	9.1	8.6	7.9	7.9	7.6	7.6	8.7	8.2	7.1	6.2	5.9	6.5
Premed, Predent, Prevet.				3.3	3.4	3.2	3.4	3.0	3.1	3.2	3.2	3.1	2.9	2.5	2.8
Social Sciences*	8.1	6.2	5.6	7.6	7.4	7.8	6.7	6.2	5.8	6.1	6.7	7.6	8.0	8.1	9.5
Other Fields (Technical)	5.3	8.6	7.5	5.4	5.6	5.5	6.9	6.8	7.8	7.5	5.8	5.6	4.0	4.0	2.5
Other Fields (Non-Tech)	7.2	9.5	10.7	7.3	6.6	7.2	5.5	6.5	6.6	6.8	6.9	7.6	7.0	8.3	8.9
Undecided	4.7	5.0	4.7	4.7	4.6	4.8	4.7	4.7	4.6	4.9	5.2	5.9	6.5	6.6	6.8

* Political Science is included in Arts and Humanities through 1975 and then in Social Sciences.

SOURCE: *The American Freshman: National Norms for Fall 1978 through 1988*, Cooperative Institutional Research Program, University of California at Los Angeles and American Council on Education

TABLE 1-26

PROBABLE CAREER CHOICES OF COLLEGE FRESHMEN, BY SEX (WEIGHTED NATIONAL NORMS), SELECTED YEARS, 1978-1988

	1978		1980		1982		1984		1986		1988	
FIELD	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Accountant/Actuary	6.4	6.2	5.4	6.2	5.1	6.5	5.2	6.8	5.1	6.5	5.4	6.4
Actor/Entertainer	0.8	1.0	0.9	1.0	0.7	1.0	0.7	0.9	0.9	1.0	1.0	1.1
Architect/Urban Plan.	2.5	0.5	2.8	0.8	2.2	0.6	2.2	0.5	2.3	0.7	2.8	0.8
Artist	1.0	2.1	1.4	2.4	1.3	2.1	1.3	1.6	1.4	1.9	1.7	1.8
Business												
Clerical	0.3	4.6	0.3	3.9	0.3	3.5	0.4	3.5	0.3	2.4	0.3	1.6
Executive	11.3	7.3	11.1	9.2	10.8	10.1	12.5	11.4	13.9	12.1	14.0	11.0
Owner/Proprietor	4.1	1.0	4.1	1.3	3.9	1.5	4.5	1.7	5.3	2.3	5.7	2.4
Salesperson/Buyer	1.2	1.3	1.1	1.2	1.1	1.2	1.3	1.3	1.5	1.7	1.4	1.3
Clergy	0.8	0.2	0.7	0.1	0.5	0.1	0.4	0.1	0.4	0.1	0.4	0.1
Clinical Psychologist	0.5	1.4	0.4	1.4	0.3	1.4	0.5	1.7	0.6	2.1	0.7	2.6
College Teacher	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0./4	0.3	0.4	0.3
Comp. Progr/Analyst	4.0	3.0	5.6	4.9	9.7	8.0	7.7	4.6	4.6	2.5	3.8	1.8
Conserv/Forester	1.9	0.8	1.4	0.7	1.3	0.5	1.1	0.2	1.4	0.3	1.3	0.2
Dentist	1.4	0.6	1.2	0.7	0.9	0.5	0.7	0.5	0.7	0.4	0.6	0.5
Dietician	0.1	1.0	0.1	0.7	0.1	0.6	0.1	0.5	0.0	0.4	0.0	0.3
Engineer	16.5	2.2	19.1	2.9	20.6	3.6	18.5	2.9	17.4	2.8	15.7	2.5
Farmer/Rancher	1.8	0.5	2.0	0.4	2.0	0.4	1.6	0.3	1.0	0.1	0.8	0.2
Foreign Serv. Worker	0.3	0.7	0.4	0.6	0.4	0.7	0.5	0.8	0.6	1.2	0.7	1.4
Homemaker(full-time)	0.0	0.3	0.1	0.2	0.0	0.2	0.0	0.1	0.0	0.2	0.0	0.1
Interior Decorator	0.1	1.0	0.1	1.0	0.1	1.0	0.1	0.8	0.1	1.0	0.1	0.9
Interpreter	0.1	0.3	0.0	0.3	0.1	0.3	0.0	0.4	0.1	0.3	0.1	0.3
Lab. Tech/Hygienist	0.7	3.0	0.6	2.3	0.5	2.0	0.4	1.5	0.3	1.1	0.3	0.6
Law Enforce. Officer	2.2	0.9	1.8	0.6	1.9	0.5	1.8	0.5	1.7	0.6	2.0	0.5
Lawyer/Judge	5.3	3.4	4.8	3.5	4.7	3.9	4.4	3.7	4.1	4.0	5.5	5.3
Military Career	1.8	0.4	1.7	0.2	1.6	0.2	2.1	0.3	2.3	0.3	2.1	0.2
Musician	1.6	1.2	1.5	0.9	1.4	0.9	1.2	0.7	1.5	0.8	1.4	0.8
Nurse	0.2	7.7	0.2	7.2	0.2	7.7	0.2	7.5	0.2	5.1	0.3	4.4
Optometrist	0.3	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.3
Pharmacist	0.7	0.6	0.5	0.5	0.3	0.5	0.5	0.8	0.6	0.8	0.8	1.3
Physician	4.3	2.8	4.1	2.9	4.1	3.1	4.5	3.5	3.9	3.4	4.0	3.5
School Counselor	0.1	0.3	0.1	0.3	0.1	0.2	0.1	0.3	0.1	0.4	0.1	0.4
School Princ/Supt.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Scientific Researcher	2.7	1.7	2.2	1.3	1.8	1.2	1.9	1.2	1.8	1.1	2.0	1.3
Social/Rec. Worker	0.6	3.9	0.6	3.2	0.3	2.0	0.4	2.1	0.4	2.3	0.3	2.2
Statistician	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Therapist	0.5	3.4	0.6	3.4	0.5	3.3	0.9	3.8	0.9	3.2	1.0	3.4
Teacher (Elementary)	0.4	6.8	0.5	6.9	0.4	5.5	0.4	6.1	0.6	7.9	0.7	9.7
Teacher (Secondary)	2.0	3.0	1.9	2.4	1.4	1.9	1.8	2.5	2.6	3.1	2.7	3.6
Veterinarian	1.1	1.6	0.9	1.5	0.8	1.5	0.7	1.5	0.7	1.1	0.6	1.1
Writer/Journalist	1.4	2.4	1.6	2.5	1.6	2.6	1.6	2.4	1.6	2.9	1.9	2.9
Skilled Trades	3.1	0.4	3.2	0.5	2.9	0.3	2.4	0.2	2.6	0.31	1.2	0.2
Other	5.7	8.3	5.8	8.1	5.6	7.5	5.3	7.7	5.8	7.7	6.2	7.4
Undecided	9.6	11.6	8.9	11.3	8.1	10.8	9.2	12.3	9.9	13.2	9.8	12.9

SOURCE: **Trends in Minority Enrollment in Higher Education, Fall 1976-Fall 1986,** U.S. Department of Education

TABLE 1-27

TOTAL ENROLLMENT IN HIGHER EDUCATION INSTITUTIONS BY INSTITUTIONAL TYPE AND RACE/ETHNICITY, FALL 1976-86

Type of institution and race/ethnicity of student	Number, in thousands						Percentage distribution of total enrollment					
	1976	1978	1980	1982	1984	1986	1976	1978	1980	1982	1984	1986
All institutions	10,986	11,231	12,087	12,388	12,235	12,501	100.0	100.0	100.0	100.0	100.0	100.0
White, non-Hispanic	9,076	9,194	9,833	9,997	9,815	9,914	82.6	81.9	81.4	80.7	80.2	79.3
Total minority	1,691	1,785	1,949	2,059	2,085	2,243	15.4	15.9	16.1	16.6	17.0	17.9
Black, non-Hispanic	1,033	1,054	1,107	1,101	1,076	1,081	9.4	9.4	9.2	8.9	8.8	8.6
Hispanic	384	417	472	519	535	624	3.5	3.7	3.9	4.2	4.4	5.0
Asian or Pacific Islander	198	235	286	351	390	448	1.8	2.1	2.4	2.8	3.2	3.6
American Indian/Alaskan Native	76	78	84	88	84	90	0.7	0.7	0.7	0.7	0.7	0.7
Nonresident alien	219	253	305	331	335	344	2.0	2.3	2.5	2.7	2.7	2.7
4-year institutions	7,107	7,203	7,565	7,648	7,708	7,826	64.7	64.1	62.6	61.7	63.0	62.6
White, non-Hispanic	5,999	6,027	6,275	6,306	6,301	6,340	54.6	53.7	51.9	50.9	51.5	50.7
Total minority	931	975	1,050	1,073	1,124	1,195	8.5	8.7	8.7	8.7	9.2	9.6
Black, non-Hispanic	604	612	634	612	617	615	5.5	5.4	5.2	4.9	5.0	4.9
Hispanic	174	190	217	229	246	278	1.6	1.7	1.8	1.8	2.0	2.2
Asian or Pacific Islander	119	138	162	193	223	262	1.1	1.2	1.3	1.6	1.8	2.1
American Indian/Alaskan Native	35	35	37	39	38	40	0.3	0.3	0.3	0.3	0.3	0.3
Nonresident alien	177	201	241	270	282	291	1.6	1.8	2.0	2.2	2.3	2.3
2-year institutions	3,879	4,028	4,521	4,740	4,527	4,675	35.3	35.9	37.4	38.3	37.0	37.4
White, non-Hispanic	3,077	3,167	3,558	3,692	3,514	3,575	28.0	28.2	29.4	29.8	28.7	28.6
Total minority	760	810	899	987	961	1,047	6.9	7.2	7.4	8.0	7.9	8.4
Black, non-Hispanic	429	443	472	489	459	466	3.9	3.9	3.9	3.9	3.7	3.7
Hispanic	210	227	255	291	289	345	1.9	2.0	2.1	2.3	2.4	2.8
Asian or Pacific Islander	79	97	124	158	167	186	0.7	0.9	1.0	1.3	1.4	1.5
American Indian/Alaskan Native	41	43	47	49	46	51	0.4	0.4	0.4	0.4	0.4	0.4
Nonresident alien	42	52	64	61	53	53	0.4	0.5	0.5	0.5	0.4	0.4

Note:--Because of underreporting and nonreporting of racial/ethnic data, data were estimated when possible. Also, due to rounding, detail may not add to totals.

Sources:--U.S. Department of Education, Center for Education Statistics, "Fall Enrollment in Colleges and Universities", and Integrated Postsecondary Education Data System, "Fall Enrollment, 1986" survey and unpublished tabulations.

SOURCE: **Trends in Minority Enrollment in Higher Education, Fall 1976-Fall 1986,** U.S. Department of Education

TABLE 1-28

TOTAL ENROLLMENT IN HIGHER EDUCATION INSTITUTIONS BY SEX AND RACE, FALL 1976-86

Control of institution and race/ethnicity and sex of student	Number, in thousands						Percent distribution					
	1976	1978	1980	1982	1984	1986	1976	1978	1980	1982	1984	1986
All institutions												
Total	10,986	11,231	12,087	12,388	12,235	12,501	100.0	100.0	100.0	100.0	100.0	100.0
White, non-Hispanic	9,076	9,194	9,833	9,997	9,815	9,914	82.6	81.9	81.4	80.7	80.2	79.3
Black, non-Hispanic	1,033	1,054	1,107	1,101	1,076	1,081	9.4	9.4	9.2	8.9	8.8	8.6
Hispanic	384	417	472	519	535	624	3.5	3.7	3.9	4.2	4.4	5.0
Asian or Pacific Islander	198	235	286	351	390	448	1.8	2.1	2.4	2.8	3.2	3.6
American Indian/Alaskan Native	76	78	84	88	84	90	0.7	0.7	0.7	0.7	0.7	0.7
Nonresident alien	219	253	305	331	335	344	2.0	2.2	2.5	2.7	2.7	2.7
Public												
Total	8,641	8,770	9,456	9,695	9,458	9,722	78.7	78.1	78.2	78.3	77.3	77.8
White, non-Hispanic	7,095	7,136	7,656	7,785	7,543	7,650	64.6	63.5	63.3	62.8	61.6	61.2
Black, non-Hispanic	831	840	876	873	844	855	7.6	7.5	7.2	7.0	6.9	6.8
Hispanic	337	363	406	446	456	539	3.1	3.2	3.4	3.6	3.7	4.3
Asian or Pacific Islander	166	195	240	296	323	372	1.5	1.7	2.0	2.4	2.6	3.0
American Indian/Alaskan Native	68	68	74	77	72	79	0.6	0.6	0.6	0.6	0.6	0.6
Nonresident alien	145	167	204	219	219	226	1.3	1.5	1.7	1.8	1.8	1.8
Private												
Total	2,345	2,461	2,630	2,693	2,777	2,779	21.3	21.9	21.8	21.7	22.7	22.2
White, non-Hispanic	1,982	2,058	2,177	2,212	2,272	2,264	18.0	18.3	18.0	17.9	18.6	18.1
Black, non-Hispanic	202	215	231	228	232	226	1.8	1.9	1.9	1.8	1.9	1.8
Hispanic	47	55	66	74	79	84	0.4	0.5	0.5	0.6	0.6	0.7
Asian or Pacific Islander	32	40	47	55	67	76	0.3	0.4	0.4	0.4	0.5	0.6
American Indian/Alaskan Native	9	9	10	10	11	11	0.1	0.1	0.1	0.1	0.1	0.1
Nonresident alien	73	85	101	113	116	118	0.7	0.8	0.8	0.9	0.9	0.9
Men												
Total	5,794	5,621	5,868	5,999	5,859	5,885	52.7	50.1	48.5	48.4	47.9	47.1
White, non-Hispanic	4,814	4,613	4,773	4,830	4,690	4,646	43.8	41.1	39.5	39.0	38.3	37.2
Black, non-Hispanic	470	453	464	458	437	436	4.3	4.0	3.8	3.7	3.6	3.5
Hispanic	210	213	232	252	254	292	1.9	1.9	1.9	2.0	2.1	2.3
Asian or Pacific Islander	108	126	151	189	210	239	1.0	1.1	1.3	1.5	1.7	1.9
American Indian/Alaskan Native	39	37	38	40	38	40	0.4	0.3	0.3	0.3	0.3	0.3
Nonresident alien	154	180	211	230	231	232	1.4	1.6	1.7	1.9	1.9	1.9
Women												
Total	5,191	5,609	6,219	6,389	6,376	6,615	47.3	49.9	51.5	51.6	52.1	52.9
White, non-Hispanic	4,262	4,581	5,060	5,167	5,125	5,268	38.8	40.8	41.9	41.7	41.9	42.1
Black, non-Hispanic	563	601	643	644	639	645	5.1	5.4	5.3	5.2	5.2	5.2
Hispanic	174	205	240	267	281	332	1.6	1.8	2.0	2.2	2.3	2.7
Asian or Pacific Islander	89	109	135	162	180	209	0.8	1.0	1.1	1.3	1.5	1.7
American Indian/Alaskan Native	38	41	46	48	46	51	0.3	0.4	0.4	0.4	0.4	0.4
Nonresident alien	65	73	94	101	104	111	0.6	0.7	0.8	0.8	0.9	0.9

Note:--Because of underreporting and nonreporting of racial/ethnic data, data were estimated when possible. Also, due to rounding, detail may not add to totals. See table 2 footnotes for data sources.

Source: The **Chronicle of Higher Education Almanac,** September 6, 1989

TABLE 1-29

COLLEGE AND UNIVERSITY ENROLLMENT BY SEX, AGE AND LEVEL, FALL 1987

	Undergraduate			First-professional			Graduate			All levels		
	Men	**Women**	**Total**	**Men**	**Women**	**Total**	**Men**	**Women**	**Total**	**Men**	**Women**	**Total**
Full-time students												
Under 18	1.5%	2.0%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	1.8%	1.6%
18 to 19	34.4	37.6	36.1	0.1	0.1	0.1	0.1	0.1	0.1	30.2	34.3	32.2
20 to 21	29.8	29.2	29.5	2.6	3.6	3.0	1.1	1.3	1.2	26.3	26.8	26.5
22 to 24	18.7	13.5	16.0	40.0	40.2	40.1	22.0	24.0	22.9	19.8	14.8	17.3
25 to 29	7.8	6.5	7.2	37.6	32.4	35.7	36.8	30.3	33.9	11.4	8.7	10.1
30 to 34	3.4	4.3	3.8	10.9	11.5	11.1	19.7	16.5	18.3	5.0	5.2	5.1
35 to 39	1.7	2.9	2.3	4.5	5.9	5.0	10.3	11.7	10.9	2.5	3.5	3.0
40 to 49	1.3	2.4	1.8	2.1	3.9	2.8	6.0	11.3	8.3	1.7	3.0	2.4
50 to 64	0.3	0.5	0.4	0.4	0.7	0.5	1.3	2.6	1.9	0.4	0.7	0.5
65 and over	0.1	0.1	0.1	0.1	0.1	0.1	0.7	0.2	0.5	0.2	0.1	0.1
Age unknown	1.0	1.0	1.0	1.6	1.7	1.7	2.1	1.9	2.0	1.1	1.1	1.1
Number	3,163,754	3,299,312	6,463,066	153,661	88,143	241,804	293,503	233,133	526,636	3,610,918	3,620,588	7,231,506
Part-time students												
Under 18	2.0%	2.0%	2.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	1.7%	1.7%	1.7%
18 to 19	8.7	7.5	8.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	6.2	6.6
20 to 21	11.5	9.3	10.2	0.4	0.3	0.4	0.3	0.3	0.3	9.5	7.8	8.5
22 to 24	17.1	13.6	15.1	10.5	10.0	10.3	8.9	8.6	8.7	15.6	12.8	14.0
25 to 29	20.6	17.6	18.9	35.8	30.4	33.7	28.9	23.3	25.7	22.2	18.6	20.1
30 to 34	14.6	14.7	14.7	24.3	22.3	23.6	23.4	18.7	20.7	16.2	15.4	15.7
35 to 39	9.3	12.0	10.9	14.6	16.0	15.1	16.7	18.0	17.5	10.6	13.0	12.0
40 to 49	8.8	13.7	11.7	10.1	14.7	11.9	14.2	20.5	17.8	9.7	14.8	12.7
50 to 64	3.7	5.3	4.6	2.6	3.8	3.1	3.3	5.4	4.5	3.6	5.3	4.6
65 and over	1.6	2.1	1.9	0.3	0.3	0.3	0.6	0.5	0.5	1.4	1.9	1.7
Age unknown	2.1	2.1	2.1	1.4	2.1	1.7	3.6	4.5	4.1	2.4	2.5	2.4
Number	1,904,930	2,679,906	4,584,836	16,472	10,191	26,663	399,811	525,491	925,302	2,321,213	3,215,588	5,536,801
All students												
Under 18	1.7%	2.0%	1.9%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	1.5%	1.8%	1.6%
18 to 19	24.7	24.1	24.4	0.1	0.1	0.1	0.0	0.0	0.0	21.1	21.1	21.1
20 to 21	22.9	20.3	21.5	2.4	3.2	2.7	0.6	0.7	0.6	19.7	17.9	18.7
22 to 24	18.1	13.5	15.6	37.1	37.1	37.1	14.4	13.4	13.9	18.2	13.9	15.9
25 to 29	12.6	11.5	12.0	37.4	32.2	35.5	32.2	25.5	28.7	15.6	13.4	14.4
30 to 34	7.6	8.9	8.3	12.2	12.6	12.3	21.8	18.0	19.8	9.4	10.0	9.7
35 to 39	4.6	7.0	5.9	5.5	6.9	6.0	14.0	16.1	15.1	5.7	8.0	6.9
40 to 49	4.1	7.4	5.9	2.9	5.0	3.7	10.7	17.7	14.3	4.9	8.5	6.8
50 to 64	1.6	2.6	2.2	0.7	1.0	0.8	2.5	4.6	3.6	1.7	2.8	2.3
65 and over	0.7	1.0	0.9	0.1	0.1	0.1	0.6	0.4	0.5	0.6	0.9	0.8
Age unknown	1.4	1.5	1.5	1.6	1.8	1.7	3.0	3.7	3.3	1.6	1.7	1.7
Total number	5,068,684	5,979,218	11,047,902	170,133	98,334	268,467	693,314	758,624	1,451,938	5,932,131	6,836,176	12,768,307

SOURCE: U.S. DEPARTMENT OF EDUCATION

SOURCE: Digest of Education Statistics 1988, National Center for Education Statistics

TABLE 1-30

ENROLLMENT OF PERSONS 14-34 YEARS OF AGE IN HIGHER EDUCATION, BY SEX AND RACE/ETHNICITY, 1965-1986

Characteristic	1965	1970	1975	1976	1977	1978	1979	1980	1981[1]	1982	1983	1984	1985	1986
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Numbers in thousands													
All students	**5,675**	**7,413**	**9,697**	**9,950**	**10,217**	**9,838**	**9,978**	**10,180**	**10,734**	**10,919**	**10,825**	**10,859**	**10,863**	**10,606**
White														
Total	5,317	6,759	8,514	8,644	8,812	8,514	8,709	8,875	9,162	9,328	9,242	9,289	9,334	8,943
Men	3,326	4,066	4,771	4,658	4,717	4,508	4,400	4,438	4,620	4,650	4,718	4,709	4,633	4,485
Women	1,991	2,693	3,743	3,986	4,095	4,006	4,309	4,437	4,543	4,679	4,524	4,559	4,701	4,459
Black														
Total	274	522	948	1,062	1,103	1,022	1,002	1,007	1,133	1,127	1,102	1,138	1,049	1,136
Men	126	253	442	489	490	452	434	437	505	482	497	544	458	488
Women	148	269	506	573	614	569	568	570	628	645	605	594	591	649
Hispanic origin[3]														
Total	–	–	411	427	418	377	440	443	510	493	523	524	579	677
Men	–	–	219	223	223	196	226	222	258	216	253	232	280	331
Women	–	–	192	204	194	181	214	221	252	278	270	292	299	346
	Percentage distribution													
All students	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White														
Total	93.7	91.2	87.8	86.9	86.2	86.5	87.3	87.2	85.4	85.4	85.4	85.4	85.9	84.3
Men	58.6	54.8	49.2	46.8	46.2	45.8	44.1	43.6	43.0	42.6	43.6	43.4	42.6	42.3
Women	35.1	36.3	38.6	40.1	40.1	40.7	43.2	43.6	42.3	42.9	41.8	42.0	43.3	42.0
Black														
Total	4.8	7.0	9.8	10.7	10.8	10.4	10.0	9.9	10.6	10.3	10.2	10.5	9.7	10.7
Men	2.2	3.4	4.6	4.9	4.8	4.6	4.3	4.3	4.7	4.4	4.6	5.0	4.2	4.6
Women	2.6	3.6	5.2	5.8	6.0	5.8	5.7	5.6	5.9	5.9	5.6	5.5	5.4	6.1
Hispanic origin[3]														
Total	–	–	4.2	4.3	4.1	3.8	4.4	4.4	4.8	4.5	4.8	4.8	5.3	6.4
Men	–	–	2.3	2.2	2.2	2.0	2.3	2.2	2.4	2.0	2.3	2.1	2.6	3.1
Women	–	–	2.0	2.1	1.9	1.8	2.1	2.2	2.3	2.5	2.5	2.7	2.8	3.3

[1] Totals differ from those shown in other tables. This table presents data collected in sample surveys of households rather than surveys of institutions. Excludes persons age 35 and over.

[2] Data for 1981 and later years are controlled to 1980 census base.

[3] Persons of Hispanic origin may be of any race.

– Data not available.

NOTE. – Data are based on samples of the civilian noninstitutional population. Because of rounding, details may not add to totals.

TABLE 1-31

ENROLLMENT RATES OF 18-24 YEAR OLDS IN HIGHER EDUCATION, BY RACE/ETHNICITY, 1967-1985

Year	All students		White		Black		Hispanic origin[1]	
	Enrollment as a percent of 18- to 24-year-olds	Enrollment as a percent of high school graduates	Enrollment as a percent of 18- to 24-year-olds	Enrollment as a percent of high school graduates	Enrollment as a percent of 18- to 24-year-olds	Enrollment as a percent of high school graduates	Enrollment as a percent of 18- to 24-year-olds	Enrollment as a percent of high school graduates
1	2	3	4	5	6	7	8	9
1967	25.5	33.7	26.9	34.5	13.0	23.3	–	–
1968	26.0	34.2	27.5	34.9	14.5	25.2	–	–
1969	27.3	35.0	28.7	35.6	16.0	27.2	–	–
1970	25.7	32.7	27.1	33.2	15.5	26.0	–	–
1971	26.2	33.2	27.2	33.5	18.2	29.2	–	–
1972	25.5	31.9	26.4	32.3	18.1	27.1	13.4	25.8
1973	24.0	29.7	25.0	30.2	16.0	24.0	16.0	29.1
1974	24.6	30.5	25.2	30.5	17.9	26.6	18.1	32.3
1975	26.3	32.5	26.9	32.4	20.7	32.0	20.4	35.5
1976	26.7	33.1	27.1	33.0	22.6	33.5	19.9	35.8
1977	26.1	32.5	26.5	32.2	21.3	31.5	17.2	31.5
1978	25.3	31.4	25.7	31.1	20.1	29.7	15.2	27.2
1979	25.0	31.2	25.6	31.2	19.8	29.5	16.6	30.2
1980	25.6	31.6	26.2	31.8	19.2	27.6	16.1	29.8
1981	26.2	32.5	26.7	32.5	19.9	28.0	16.7	29.9
1982	26.6	33.0	27.2	33.1	19.8	28.0	16.8	29.2
1983	26.2	32.5	27.0	32.9	19.2	27.0	17.2	31.4
1984	27.1	33.2	28.0	33.7	20.4	27.2	17.9	29.9
1985	27.8	33.7	28.7	34.4	19.8	26.1	16.9	26.9

[1] Persons of Hispanic origin may be of any race.

– Data not available.

SOURCE: U.S. Department of Education Office of Educational Research and Improvement

TABLE 1-32

FALL 1986 ENROLLMENT IN INSTITUTIONS OF HIGHER EDUCATION BY ATTENDANCE STATUS, SEX AND RACE/ETHNICITY OF STUDENT

(Numbers in thousands)

	Total	White	% W	Minority Total	% M	Black	% B	His-panic	% H	Asian or Pac Is	% A	American India	% I	Nonresident Alien	% A
Total	12,501	9,914	79.3	2,243	17.9	1,081	8.6	624	5.0	448	3.6	90	0.7	343	2.7
4-year	7,826	6,340	81.0	1,195	15.3	615	7.9	278	3.6	262	3.3	40	0.5	291	3.7
Men	3,826	3,080	80.5	545	14.2	252	6.6	133	3.5	142	3.7	18	0.5	210	5.5
Women	4,000	3,259	81.5	652	16.3	364	9.1	146	3.7	120	3.0	22	0.6	90	2.3
2-year	4,675	3,575	76.5	1,047	22.4	466	10.0	345	7.4	185	4.0	51	1.1	53	1.1
Men	2,060	1,566	76.0	462	22.4	184	8.9	159	7.7	97	4.7	22	1.1	30	1.5
Women	2,615	2,009	76.8	585	22.4	282	10.8	186	7.1	88	3.4	29	1.1	22	0.8
Full-time	7,117	5,609	78.8	1,248	17.5	636	8.9	305	4.3	261	3.7	46	0.6	259	3.6
4-year	5,428	4,364	80.4	835	15.4	433	8.0	181	3.3	194	3.6	27	0.5	228	4.2
Men	2,777	2,224	80.1	393	14.2	185	6.7	90	3.2	105	3.8	13	0.5	161	5.8
Women	2,651	2,140	80.7	443	16.7	248	9.4	92	3.5	89	3.4	14	0.5	68	2.6
2-year	1,689	1,246	73.8	413	24.5	203	12.0	124	7.3	67	4.0	19	1.1	30	1.8
Men	822	613	74.6	190	23.1	85	10.3	58	7.1	38	4.6	9	1.1	19	2.3
Women	867	632	72.9	221	25.5	118	13.6	65	7.5	28	3.2	10	1.2	11	1.3
Part-time	5,384	4,305	80.0	995	18.5	445	8.3	318	5.9	188	3.5	44	0.8	85	1.6
4-year	2,398	1,976	82.4	360	15.0	182	7.6	97	4.0	69	2.9	12	0.5	63	2.6
Men	1,049	857	81.7	151	14.4	66	6.3	43	4.1	37	3.5	5	0.5	41	3.9
Women	1,349	1,119	83.0	208	15.4	116	8.6	54	4.0	31	2.3	7	0.5	22	1.6
2-year	2,986	2,329	78.0	635	21.3	263	8.8	221	7.4	119	4.0	32	1.1	22	0.7
Men	1,238	953	77.0	272	22.0	99	8.0	101	8.2	59	4.8	13	1.1	12	1.0
Women	1,748	1,377	78.8	362	20.7	163	9.3	120	6.9	60	3.4	19	1.1	10	0.6

Note: Due to rounding, detail may not add to totals.

TABLE 1-33

ENROLLMENT IN INSTITUTIONS OF HIGHER EDUCATION BY SEX, ATTENDANCE STATUS, AND CONTROL 1978-88

(Numbers in thousands)

Year	Total			Attendance status		Control	
	Total	Men	Women	Full-time	Part-time	Public	Private
1978	11,260	5,641	5,619	6,668	4,592	8,786	2,474
1979	11,570	5,683	5,887	6,794	4,776	9,037	2,533
1980	12,097	5,874	6,223	7,097	4,999	9,457	2,640
1981	12,372	5,975	6,397	7,181	5,190	9,647	2,725
1982	12,426	6,031	6,394	7,221	5,205	9,696	2,730
1983	12,465	6,024	6,441	7,261	5,204	9,683	2,782
1984	12,242	5,864	6,378	7,098	5,144	9,477	2,765
1985	12,247	5,818	6,429	7,075	5,172	9,479	2,768
1986	12,517	5,891	6,626	7,128	5,389	9,722	2,794
1987*..........	12,544	5,881	6,663	7,219	5,325	9,706	2,838
1988*..........	12,849	5,946	6,904	7,371	5,478	10,045	2,804

*Estimate.

SOURCE: National Center for Education Statistics, Department of Education

TABLE 1-34

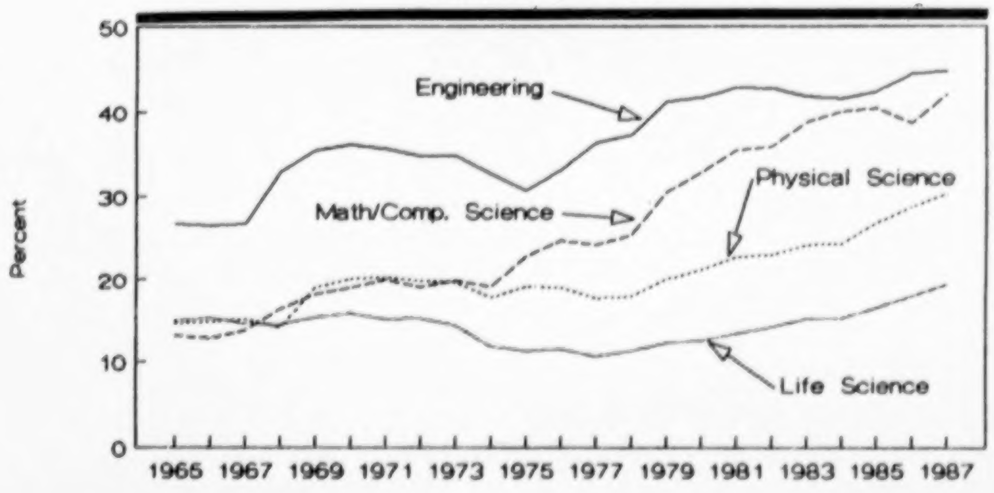
TOTAL ENROLLMENT IN INSTITUTIONS OF HIGHER EDUCATION BY LEVEL OF STUDY AND RACE/ETHNICITY OF STUDENT FALL 1976 — FALL 1986 (Numbers in thousands)

	Total	White	% W	Minority Total	% M	Black	% B	His-panic	% H	Asian or Pac Is	% A	American India	% I	Nonresident Alien	% A
Undergraduates															
1976	9,520	7,827	82.2	1,550	16.3	950	10.0	357	3.8	173	1.8	70	0.7	142	1.5
1978	9,757	7,946	81.4	1,642	16.8	975	10.0	388	4.0	206	2.1	72	0.7	169	1.7
1980	10,560	8,556	81.0	1,797	17.0	1,028	9.7	438	4.1	253	2.4	79	0.7	208	2.0
1982	10,875	8,749	80.5	1,907	17.5	1,028	9.5	485	4.5	313	2.9	82	0.8	220	2.0
1984	10,610	8,484	80.0	1,911	18.0	995	9.4	495	4.7	343	3.2	78	0.7	216	2.0
1986	10,797	8,552	79.2	2,041	18.9	995	9.2	569	5.3	394	3.6	84	0.8	204	1.9
Total	62,119	50,114	80.7	10,867	17.5	5,971	9.6	2,732	4.4	1,682	2.7	465	0.7	1,159	1.9
Graduates															
1976	1,221	1,030	84.4	119	9.7	72	5.9	22	1.8	21	1.7	4	0.3	73	6.0
1978	1,219	1,019	83.6	120	9.8	68	5.6	24	2.0	24	2.0	4	0.3	80	6.6
1980	1,250	1,030	82.4	125	10.0	66	5.3	27	2.2	28	2.2	4	0.3	94	7.5
1982	1,235	1,002	81.1	123	10.0	61	4.9	27	2.2	30	2.4	5	0.4	108	8.7
1984	1,344	1,087	80.9	141	10.5	67	5.0	32	2.4	37	2.8	5	0.4	115	8.6
1986	1,434	1,132	78.9	166	11.6	72	5.0	46	3.2	43	3.0	5	0.3	136	9.5
Total	7,703	6,300	81.8	804	10.4	406	5.3	178	2.3	183	2.4	27	0.4	606	7.9
First-prof.															
1976	244	220	90.2	21	8.6	11	4.5	5	2.0	4	1.6	1	0.4	3	1.2
1978	255	229	89.8	22	8.6	11	4.3	5	2.0	5	2.0	1	0.4	3	1.2
1980	277	248	89.5	26	9.4	13	4.7	7	2.5	6	2.2	1	0.4	3	1.1
1982	278	246	88.5	29	10.4	13	4.7	7	2.5	8	2.9	1	0.4	3	1.1
1984	278	243	87.4	32	11.5	13	4.7	8	2.9	9	3.2	1	0.4	3	1.1
1986	270	230	85.2	36	13.3	14	5.2	9	3.3	11	4.1	1	0.4	4	1.5
Total	1,602	1,416	88.4	175	10.9	75	4.7	41	2.6	43	2.7	6	0.4	19	1.2

Note: Because of underreporting and nonreporting of racial/ethnic data, data were estimated when posible. Due to rounding, detail may not add to totals.

CHART 1-4

PERCENT FOREIGN NS&E ENROLLMENT 1965 - 1987



Source: NSF

Graph by CPST

Source: Center for Education Statistics as published by the **Chronicle of Higher Education**, June 28, 1989

TABLE 1-35

ENROLLMENT IN U.S. COLLEGES AND UNIVERSITIES BY LEVEL, ENROLLMENT STATUS, SEX, TYPE AND CONTROL OF INSTITUTION AND AGE, FALL 1987

By level, enrollment status, and type and control of institution

	Undergraduate			First-professional			Graduate			All levels		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
Public institutions												
4-year												
Full-time	1,631,422	1,663,064	3,294,486	65,449	39,926	105,375	185,222	151,485	336,707	1,882,093	1,854,475	3,736,568
Part-time	476,361	608,463	1,084,824	2,706	2,210	4,916	243,624	364,078	607,702	722,691	974,751	1,697,442
Total	2,107,783	2,271,527	4,379,310	68,155	42,136	110,291	428,846	515,563	944,409	2,604,784	2,829,226	5,434,010
2-year												
Full-time	744,110	786,802	1,530,912	0	0	0	0	0	0	744,110	786,802	1,530,912
Part-time	1,224,730	1,785,412	3,010,142	0	0	0	0	0	0	1,224,730	1,785,412	3,010,142
Total	1,968,840	2,572,214	4,541,054	0	0	0	0	0	0	1,968,840	2,572,214	4,541,054
All												
Full-time	2,375,532	2,449,866	4,825,398	65,449	39,926	105,375	185,222	151,485	336,707	2,626,203	2,641,277	5,267,480
Part-time	1,701,091	2,393,875	4,094,966	2,706	2,210	4,916	243,624	364,078	607,702	1,947,421	2,760,163	4,707,584
Total	4,076,623	4,843,741	8,920,364	68,155	42,136	110,291	428,846	515,563	944,409	4,573,624	5,401,440	9,975,064
Private institutions												
4-year												
Full-time	712,165	747,746	1,459,911	88,212	48,217	136,429	108,281	81,648	189,929	908,658	877,611	1,786,269
Part-time	175,913	256,546	432,459	13,766	7,981	21,747	156,187	161,413	317,600	345,866	425,940	771,806
Total	888,078	1,004,292	1,892,370	101,978	56,198	158,176	264,468	243,061	507,529	1,254,524	1,303,551	2,558,075
2-year												
Full-time	76,057	101,700	177,757	0	0	0	0	0	0	76,057	101,700	177,757
Part-time	27,926	29,485	57,411	0	0	0	0	0	0	27,926	29,485	57,411
Total	103,983	131,185	235,168	0	0	0	0	0	0	103,983	131,185	235,168
All												
Full-time	788,222	849,446	1,637,668	88,212	48,217	136,429	108,281	81,648	189,929	984,715	979,311	1,964,026
Part-time	203,839	286,031	489,870	13,766	7,981	21,747	156,187	161,413	317,600	373,792	455,425	829,217
Total	992,061	1,135,477	2,127,538	101,978	56,198	158,176	264,468	243,061	507,529	1,358,507	1,434,736	2,793,243
Public and private institutions												
4-year												
Full-time	2,343,587	2,410,810	4,754,397	153,661	88,143	241,804	293,503	233,133	526,636	2,790,751	2,732,086	5,522,837
Part-time	652,274	865,009	1,517,283	16,472	10,191	26,663	399,811	525,491	925,302	1,068,557	1,400,691	2,469,248
Total	2,995,861	3,275,819	6,271,680	170,133	98,334	268,467	693,314	758,624	1,451,938	3,859,308	4,132,777	7,992,085
2-year												
Full-time	820,167	888,502	1,708,669	0	0	0	0	0	0	820,167	888,502	1,708,669
Part-time	1,252,656	1,814,897	3,067,553	0	0	0	0	0	0	1,252,656	1,814,897	3,067,553
Total	2,072,823	2,703,399	4,776,222	0	0	0	0	0	0	2,072,823	2,703,399	4,776,222
All												
Full-time	3,163,754	3,299,312	6,463,066	153,661	88,143	241,804	293,503	233,133	526,636	3,610,918	3,620,588	7,231,506
Part-time	1,904,930	2,679,906	4,584,836	16,472	10,191	26,663	399,811	525,491	925,302	2,321,213	3,215,588	5,536,801
Total	5,068,684	5,979,218	11,047,902	170,133	98,334	268,467	693,314	758,624	1,451,938	5,932,131	6,836,176	12,768,307

By level, enrollment status, and age of student

	Undergraduate			First-professional			Graduate			All levels		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
Full-time students												
Under 18	1.5%	2.0%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	1.8%	1.6%
18 and 19	34.4	37.6	36.1	0.1	0.1	0.1	0.1	0.1	0.1	30.2	34.3	32.2
20 to 21	29.8	29.2	29.5	2.6	3.6	3.0	1.1	1.3	1.2	26.3	26.8	26.5
22 to 24	18.7	13.5	16.0	40.0	40.2	40.1	22.0	24.0	22.9	19.8	14.8	17.3
25 to 29	7.8	6.5	7.2	37.6	32.4	35.7	36.8	30.3	33.9	11.4	8.7	10.1
30 to 34	3.4	4.3	3.8	10.9	11.5	11.1	19.7	16.5	18.3	5.0	5.2	5.1
35 to 39	1.7	2.9	2.3	4.5	5.9	5.0	10.3	11.7	10.9	2.5	3.5	3.0
40 to 49	1.3	2.4	1.8	2.1	3.9	2.8	6.0	11.3	8.3	1.7	3.0	2.4
50 to 64	0.3	0.5	0.4	0.4	0.7	0.5	1.3	2.6	1.9	0.4	0.7	0.5
65 and over	0.1	0.1	0.1	0.1	0.1	0.1	0.7	0.2	0.5	0.2	0.1	0.1
Age unknown	1.0	1.0	1.0	1.8	1.7	1.7	2.1	1.9	2.0	1.1	1.1	1.1
Part-time students												
Under 18	2.0%	2.0%	2.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	1.7%	1.7%	1.7%
18 and 19	8.7	7.5	8.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	6.2	6.6
20 to 21	11.5	9.3	10.2	0.4	0.3	0.4	0.3	0.3	0.3	9.5	7.8	8.5
22 to 24	17.1	13.6	15.1	10.5	10.0	10.3	8.9	8.6	8.7	15.6	12.8	14.0
25 to 29	20.6	17.6	18.9	35.6	30.4	33.7	28.9	23.3	25.7	22.2	18.6	20.1
30 to 34	14.6	14.7	14.7	24.3	22.3	23.6	23.4	18.7	20.7	16.2	15.4	15.7
35 to 39	9.3	12.0	10.9	14.6	16.0	15.1	16.7	18.0	17.5	10.6	13.0	12.0
40 to 49	8.6	13.7	11.7	10.1	14.7	11.9	14.2	20.5	17.6	9.7	14.8	12.7
50 to 64	3.7	5.3	4.6	2.6	3.6	3.1	3.3	5.4	4.5	3.6	5.3	4.6
65 and over	1.6	2.1	1.9	0.3	0.3	0.3	0.6	0.5	0.5	1.4	1.9	1.7
Age unknown	2.1	2.1	2.1	1.4	2.1	1.7	3.6	4.5	4.1	2.4	2.5	2.4
All students												
Under 18	1.7%	2.0%	1.9%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	1.5%	1.8%	1.6%
18 and 19	24.7	24.1	24.4	0.1	0.1	0.1	0.0	0.0	0.0	21.1	21.1	21.1
20 to 21	22.9	20.3	21.5	2.4	3.2	2.7	0.8	0.7	0.8	19.7	17.9	18.7
22 to 24	18.1	13.5	15.6	37.1	37.1	37.1	14.4	13.4	13.9	18.2	13.9	15.9
25 to 29	12.6	11.5	12.0	37.4	32.2	35.5	32.2	25.5	28.7	15.6	13.4	14.4
30 to 34	7.6	8.9	8.3	12.2	12.6	12.3	21.8	18.0	19.8	9.4	10.0	9.7
35 to 39	4.6	7.0	5.9	5.5	6.9	6.0	14.0	16.1	15.1	5.7	6.0	5.9
40 to 49	4.1	7.4	5.9	2.9	5.0	3.7	10.7	17.7	14.3	4.9	8.5	6.8
50 to 64	1.6	2.8	2.2	0.7	1.0	0.8	2.5	4.6	3.6	1.7	2.8	2.3
65 and over	0.7	1.0	0.9	0.1	0.1	0.1	0.6	0.4	0.5	0.6	0.9	0.8
Age unknown	1.4	1.5	1.5	1.8	1.8	1.7	3.0	3.7	3.3	1.6	1.7	1.7

SOURCE: Open Doors, 1987-88, Institute for International Education

TABLE 1-36

DISTRIBUTION BY FIELD OF STUDY OF FOREIGN STUDENTS IN THE U.S, 1987-88

Field of study	1986-87 Number of foreign students	1986-87 Proportion of foreign students	1987-88 Number of foreign students	1987-88 Proportion of foreign students
Agriculture	7,200	2.1%	7,930	2.3%
Allied health	3,000	0.9%	2,860	0.8%
Architecture & environmental design	5,950	1.7%	6,280	1.8%
Area & ethnic studies	920	0.3%	1,190	0.3%
Business & management	66,140	18.9%	66,990	18.8%
Communications	4,890	1.4%	5,060	1.4%
Communications technologies	720	0.2%	520	0.1%
Computer & information sciences	27,080	7.7%	26,680	7.5%
Education	12,130	3.5%	11,140	3.1%
Engineering	74,290	21.3%	73,880	20.7%
English language	13,530	3.9%	14,030	3.9%
Foreign languages	3,230	0.9%	3,650	1.0%
Health sciences	11,350	3.2%	11,050	3.1%
Home economics	1,850	0.5%	1,700	0.5%
Industrial arts	820	0.2%	710	0.2%
Law	2,020	0.6%	2,150	0.6%
Letters	5,480	1.6%	6,080	1.7%
Liberal & general studies	11,160	3.2%	11,020	3.1%
Library & archival sciences	770	0.2%	660	0.2%
Life sciences	9,920	2.8%	10,920	3.1%
Mathematics	8,360	2.4%	8,720	2.4%
Military sciences	210	0.1%	50	—
Multi/interdisciplinary studies	2,000	0.6%	1,870	0.5%
Parks & recreation	250	0.1%	270	0.1%
Personal & social development	1,970	0.6%	1,840	0.5%
Philosophy & religion	1,720	0.5%	1,800	0.5%
Physical sciences	16,310	4.7%	16,930	4.8%
Protective services	610	0.2%	500	0.1%
Psychology	3,310	0.9%	3,510	1.0%
Public affairs	2,920	0.8%	3,020	0.8%
Science technologies	1,140	0.3%	1,400	0.4%
Social sciences	17,600	5.0%	19,160	5.4%
Theology	2,770	0.8%	2,720	0.8%
Visual & performing arts	8,050	2.3%	8,870	2.5%
Vocational home economics	260	0.1%	220	0.1%
Undeclared	19,680	5.6%	20,790	5.8%
Total	349,610	100.0%	356,190	100.0%

TABLE 1-37

FOREIGN STUDENTS IN THE U.S. RANKED BY COUNTRY OF ORIGIN OF , 1987-88

Rank Country or territory	Students	Rank Country or territory	Students
1. Taiwan	26,660	33. Italy	2,200
2. China	25,170	34. Bangladesh	2,170
3. India	21,010	35. South Africa	2,130
4. Republic of Korea	20,520	36. Nicaragua	2,100
5. Malaysia	19,480	37. Egypt	2,090
6. Japan	18,050	38. Trinidad & Tobago	2,050
7. Canada	15,690	39. Sri Lanka	2,030
8. Hong Kong	10,650	40. Kenya	1,990
9. Iran	10,420	41. Panama	1,910
10. Indonesia	9,010	42. Cyprus	1,890
11. Nigeria	8,340	42. Vietnam	1,890
12. United Kingdom	6,600	44. Norway	1,880
13. Pakistan	6,570	45. Ethiopia	1,870
14. Thailand	6,430	46. Syria	1,740
15. Mexico	6,170	47. Bahamas	1,710
16. Lebanon	5,820	48. Argentina	1,650
17. West Germany	5,730	49. Netherlands	1,630
18. Saudi Arabia	5,490	50. Sweden	1,600
19. Jordan	5,140	51. Australia	1,490
20. Singapore	4,870	52. Haiti	1,460
21. Philippines	4,420	53. Cameroon	1,400
22. France	4,310	54. United Arab Emirates	1,380
23. Greece	4,140	55. Honduras	1,250
24. Venezuela	3,790	56. Cuba	1,230
25. Colombia	3,370	57. Ireland	1,170
26. Kuwait	3,160	58. Ecuador	1,110
27. Brazil	2,950	59. Chile	1,110
28. Israel	2,690	59. Ghana	1,110
29. Turkey	2,630	59. El Salvador	1,110
30. Spain	2,500	62. Switzerland	1,040
31. Peru	2,290	63. Pacific Islands Trust Territory	1,030
32. Jamaica	2,280		

Note: Includes only countries with over 1,000 students in U.S. institutions.

SOURCE: Council of Graduate Schools/Graduate Record Exam Enrollment Survey, 1987, Early Data Release

TABLE 1-38

TOTAL GRADUATE ENROLLMENT BY MAJOR FIELD AND SEX, FALL 1987

Major Field	Total Enrollment	Men Number	Men %	Women Number	Women %
Total	991,448	472,861	48%	481,369	49%
Business	141,258	84,336	60%	48,828	35%
Education	190,058	52,759	28%	132,066	69%
Engineering	84,392	72,772	86%	10,274	12%
Humanities & Arts	81,250	35,012	43%	44,517	55%
Life Sciences	96,640	39,946	41%	54,451	56%
Physical Sciences	85,103	61,963	73%	21,823	26%
Psychology	32,465	10,970	34%	20,090	62%
Social Sciences	46,140	26,492	57%	18,566	40%
Other Fields*	119,539	46,369	39%	70,165	59%

TABLE 1-39

TOTAL GRADUATE ENROLLMENT BY MAJOR FIELD AND ENROLLMENT STATUS, FALL 1987

Major Field	Total Enrollment	Full-time Number	Full-time %	Part-time Number	Part-time %
Total	991,448	421,892	43%	516,688	52%
Business	141,258	47,532	34%	84,138	60%
Education	190,058	43,981	23%	128,856	68%
Engineering	84,392	44,754	53%	32,453	38%
Humanities & Arts	81,250	46,629	57%	29,527	36%
Life Sciences	96,640	55,512	57%	34,745	36%
Physical Sciences	85,103	49,975	59%	29,663	35%
Psychology	32,465	18,074	56%	11,917	37%
Social Sciences	46,140	26,674	58%	16,621	36%
Other Fields*	119,539	48,979	41%	60,438	51%

TABLE 1-40

TOTAL GRADUATE ENROLLMENT BY MAJOR FIELD AND CITIZENSHIP, FALL 1987

Major Field	Total Enrollment	U.S. Citizens Number	U.S. Citizens %	Non-U.S. Citizens Number	Non-U.S. Citizens %
Total	991,448	733,737	74%	118,127	12%
Business	141,258	96,736	68%	12,254	9%
Education	190,058	145,960	77%	6,057	3%
Engineering	84,392	46,739	55%	27,438	33%
Humanities & Arts	81,250	61,138	75%	8,610	11%
Life Sciences	96,640	71,650	74%	13,260	14%
Physical Sciences	85,103	50,146	59%	22,288	26%
Psychology	32,465	25,481	78%	1,243	4%
Social Sciences	46,140	29,922	65%	9,559	21%
Other Fields*	119,539	91,515	77%	7,735	6%

**Includes architecture, communications, home economics, library science, public administration, religion and theology, and social work.*

Detail variables (such as sex and enrollment status) may not sum to total because not all institutions responded to all items.

Source: Digest of Education Statistics 1988 (CS 88-600), National Center for Education Statistics

TABLE 1-41

TOTAL GRADUATE ENROLLMENT BY SEX, ATTENDANCE STATUS AND CONTROL, FALL 1969 - FALL 1986

Year	Total	Full-time	Part-time	Men		Women		Men		Women	
				Full-time	Part-time	Full-time	Part-time	Public	Private	Public	Private
1	2	3	4	5	6	7	8	9	10	11	12
1969	955	363	593	252	338	111	255	393	197	273	93
1970	1,031	379	651	264	366	115	285	423	207	301	99
1971	1,012	388	621	269	346	119	275	415	200	296	100
1972	1,066	394	671	268	358	126	313	427	199	330	109
1973	1,123	410	715	273	375	137	340	442	206	358	119
1974	1,190	427	762	276	387	151	375	454	209	398	128
1975	1,263	453	810	290	410	163	400	481	219	425	138
1976	1,333	463	870	287	427	176	443	477	237	454	165
1977	1,318	472	845	289	411	183	434	457	242	443	174
1978	1,312	468	844	280	402	188	442	441	241	453	177
1979	1,309	476	833	280	389	196	444	427	242	457	182
1980	1,343	485	860	281	394	204	466	426	247	474	195
1981	1,343	484	859	277	397	207	462	419	256	468	201
1982	1,322	485	838	280	390	205	447	417	253	453	200
1983	1,340	497	843	286	391	211	452	418	259	454	209
1984	1,345	501	844	286	386	215	459	411	261	459	215
1985	1,376	509	867	289	388	220	479	414	263	477	223
1986[2]	1,434	523	911	295	399	228	513	433	260	509	231

[1] Includes unclassified postbaccalaureate students.

[2] Preliminary data.

NOTE.—Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, Center for Education Statistics, *Projections of Education Statistics to 1988-89; Projections of Education Statistics to 1990-91;* and "Fall Enrollment in Colleges and Universities" surveys. (This table was prepared March 1988.)

TABLE 1-42

TOTAL FIRST PROFESSIONAL ENROLLMENT BY SEX, ATTENDANCE STATUS AND CONTROL, FALL 1969 - FALL 1986

Year	Total	Full-time	Part-time	Men		Women		Men		Women	
				Full-time	Part-time	Full-time	Part-time	Public	Private	Public	Private
1	2	3	4	5	6	7	8	9	10	11	12
1969	164,737	143 081	21,656	131,368	17,558	11,713	4,098	64,241	84,685	8,354	7,457
1970	173,411	157,384	16,027	144,270	14,379	13,114	1,648	68,956	89,693	6,501	8,261
1971	192,668	176,224	16,444	159,386	14,672	16,838	1,772	98,233	75,825	9,430	9,180
1972	206,659	190,039	16,620	168,990	14,453	21,049	2,167	79,723	103,720	10,842	12,374
1973	218,990	201,663	17,327	171,731	14,566	29,932	2,761	81,811	104,486	16,138	16,565
1974	235,452	216,329	19,123	178,926	15,153	37,403	3,970	84,271	109,808	20,065	21,288
1975	242,267	219,886	22,381	177,117	14,983	42,769	7,398	79,240	112,860	23,557	26,610
1976	244,292	220,124	24,168	171,967	17,843	48,157	6,325	77,873	111,937	23,468	31,014
1977	251,357	226,318	25,039	173,165	18,286	53,153	6,753	78,189	113,262	24,901	35,006
1978	256,904	232,540	24,364	174,906	17,315	57,634	7,049	77,748	114,473	26,839	37,844
1979	263,404	238,949	24,455	176,394	16,989	62,555	7,486	77,122	116,241	29,026	41,015
1980	277,767	251,359	26,408	181,448	17,896	69,911	8,512	81,022	118,322	33,415	45,008
1981	274,595	248,328	26,267	175,414	17,522	72,914	8,745	77,582	115,374	34,177	47,482
1982	278,425	252,108	26,317	173,941	17,259	78,167	9,058	76,273	114,927	37,183	50,042
1983	278,529	249,636	28,893	169,071	19,025	80,565	9,868	74,938	113,156	38,484	51,949
1984	278,598	249,708	28,890	166,286	18,663	83,422	10,227	73,722	111,227	40,186	53,463
1985	274,200	246,619	27,581	162,368	17,424	84,251	10,157	71,373	108,419	40,436	53,973
1986[1]	269,970	245,596	24,374	158,533	15,168	87,063	9,206	70,268	103,433	41,538	54,731

[1] Preliminary data.

NOTE.—Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, Center for Education Statistics, *Projections of Education Statistics to 1988-89; Projections of Education Statistics to 1990-91;* and "Fall Enrollment in Colleges and Universities" surveys. (This table was prepared March 1988.)

SOURCE: National Science Foundation SRS

TABLE 1-43

SCIENCE AND ENGINEERING GRADUATE STUDENTS IN ALL INSTITUTIONS BY FIELD AND SEX, FALL 1984-1987

FIELD	MEN				WOMEN			
	1984 1/	1985 1/	1986 1/	1987 1/	1984 1/	1985 1/	1986 1/	1987 1/
TOTAL, ALL FIELDS	265,673	270,804	276,646	279,503	160,542	163,536	168,350	170,082
ENGINEERING	85,669	87,951	91,887	93,298	11,151	11,990	13,206	13,625
AEROSPACE	2,298	2,475	2,706	2,879	133	167	201	225
AGRICULTURAL	872	863	970	907	82	78	84	97
BIOMEDICAL	1,073	1,082	1,203	1,316	294	291	346	402
CHEMICAL	6,462	6,140	5,931	6,032	983	1,016	1,032	1,168
CIVIL	13,551	13,046	13,141	13,040	2,189	2,305	2,333	2,271
ELECTRICAL	24,624	26,132	27,324	28,250	2,222	2,408	2,899	3,013
ENGINEERING SCIENCE	1,890	1,882	2,089	2,077	301	245	302	291
INDUSTRIAL	9,001	10,105	10,714	11,261	2,174	2,427	2,679	2,712
MECHANICAL	12,963	13,095	14,354	14,896	961	1,016	1,150	1,286
METALLURGICAL/MATERIALS	3,194	3,338	3,525	3,592	470	601	667	717
MINING	458	459	476	473	44	30	36	40
NUCLEAR	1,146	1,113	1,142	1,151	88	107	123	128
PETROLEUM	684	716	699	795	60	66	48	55
ENGINEERING, N.E.C.	7,454	7,505	7,614	6,628	1,151	1,234	1,306	1,220
SCIENCES, TOTAL	180,004	182,854	184,759	186,205	149,391	151,546	155,144	156,457
PHYSICAL SCIENCES	24,201	24,635	25,676	25,934	6,285	6,560	6,981	7,269
ASTRONOMY	541	563	568	602	98	108	121	120
CHEMISTRY	13,263	13,652	13,873	13,835	4,710	4,835	5,143	5,275
PHYSICS	10,172	10,165	10,958	11,193	1,345	1,495	1,568	1,668
PHYSICAL SCIENCES, N.E.C.	226	255	278	304	132	122	149	207
ENVIRONMENTAL SCIENCES	11,849	11,727	11,330	10,871	3,954	4,014	4,012	3,873
ATMOSPHERIC SCIENCES	769	807	782	784	138	157	179	168
GEOSCIENCES	7,895	7,902	7,577	6,870	2,471	2,481	2,371	2,177
OCEANOGRAPHY	1,563	1,477	1,431	1,474	628	613	651	635
ENVIRONMENTAL SCIENCES, N.E.C.	1,622	1,541	1,540	1,743	717	763	811	893
MATHEMATICAL SCIENCES	12,562	12,574	12,791	13,262	5,269	5,532	5,573	5,800
COMPUTER SCIENCES	18,659	22,329	23,148	23,061	6,705	7,193	7,430	7,155
LIFE SCIENCES	46,759	46,733	46,936	47,743	58,788	59,920	61,227	60,898
AGRICULTURAL SCIENCES	8,937	8,522	8,395	7,980	3,128	2,953	2,948	2,968
BIOLOGICAL SCIENCES	26,875	26,924	27,099	27,630	20,133	20,652	21,489	21,208
ANATOMY	605	569	560	592	424	424	413	446
BIOCHEMISTRY	2,804	2,937	3,008	2,911	1,661	1,730	1,878	1,881
BIOLOGY	7,828	7,736	7,628	7,830	5,955	5,961	6,151	5,710
BIOMETRY/EPIDEMIOLOGY	472	640	677	731	532	720	792	792
BIOPHYSICS	326	331	410	450	107	110	137	141
BOTANY	2,168	2,094	2,134	1,981	1,237	1,239	1,179	1,188
CELL BIOLOGY	789	911	1,044	1,208	467	518	672	772
ECOLOGY	746	662	632	598	355	375	390	398
ENTOMOLOGY/PARASITOLOGY	1,066	992	948	906	372	350	358	338
GENETICS	545	595	663	671	467	480	556	602
MICROBIOLOGY	2,421	2,499	2,432	2,681	1,934	1,981	1,955	2,139
NUTRITION	1,317	1,355	1,303	1,335	3,022	3,130	3,121	2,846
PATHOLOGY	872	787	825	854	596	568	573	606
PHARMACOLOGY	1,277	1,302	1,267	1,233	773	805	813	845
PHYSIOLOGY	1,388	1,375	1,397	1,383	772	836	864	836
ZOOLOGY	1,483	1,374	1,310	1,312	823	762	769	793
BIOSCIENCES, N.E.C.	769	766	861	955	638	664	868	876
HEALTH SCIENCES	10,948	11,287	11,442	12,133	35,527	36,316	36,790	36,722
DENTISTRY	664	648	731	776	186	187	207	281
NEUROLOGY	208	208	237	296	109	129	146	183
NURSING	754	766	784	987	17,657	17,601	17,349	17,026
PHARMACEUTICAL SCIENCES	1,635	1,654	1,710	1,587	884	899	967	1,021
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	2,562	2,723	2,794	3,188	3,765	4,025	3,894	3,903
SPEECH PATHOLOGY/AUDIOLOGY	1,165	1,177	1,000	754	6,718	6,976	7,007	6,734
VETERINARY SCIENCES	346	401	394	441	211	236	236	295
CLINICAL MEDICINE, N.E.C.	767	791	871	1,025	726	852	940	1,096
HEALTH RELATED, N.E.C.	2,847	2,918	2,921	3,080	5,271	5,410	6,044	6,182
PSYCHOLOGY	17,151	16,520	15,984	16,660	27,051	27,325	27,673	28,252
SOCIAL SCIENCES	48,822	48,337	48,894	48,674	41,338	41,002	42,248	43,210
AGRICULTURAL ECONOMICS	1,786	1,751	1,738	1,691	484	503	492	502
ANTHROPOLOGY	2,450	2,509	2,483	2,576	3,155	3,108	3,353	3,311
ECONOMICS (EXCEPT AGRICULTURAL)	9,791	9,680	9,398	9,364	3,274	3,319	3,279	3,335
GEOGRAPHY	2,079	1,991	2,054	2,086	1,027	997	1,028	1,110
HISTORY AND PHILOSOPHY OF SCIENCE	187	205	189	216	87	109	110	109
LINGUISTICS	1,244	1,177	1,236	1,328	1,829	1,760	1,765	1,911
POLITICAL SCIENCE	16,797	17,279	16,975	17,171	10,563	11,451	11,593	11,719
SOCIOLOGY	3,190	3,107	2,972	3,146	3,671	3,485	3,566	3,874
SOCIOLOGY/ANTHROPOLOGY	504	476	461	449	586	587	601	551
SOCIAL SCIENCES, N.E.C.	10,795	10,162	11,388	10,648	16,663	15,682	16,461	16,787

1/ INCLUDES ESTIMATED DATA FOR MASTER'S-GRANTING INSTITUTIONS SURVEYED ON A SAMPLE BASIS BEGINNING IN 1984.

SOURCE: National Science Foundation SRS

TABLE 1-44

FULL-TIME SCIENCE/ENGINEERING GRADUATE STUDENTS IN DOCTORATE GRANTING INSTITUTIONS BY FIELD AND SEX, 1974-87

Year	Total	Eng	Phys#	Envir	Math	Comp	Agri	Biol	Health	Psych	Social
TOTAL											
1974	195455	33635	21255	8381	10003	3736	7614	32175	15241	18866	44549
1975	210307	37105	21317	8919	10038	4114	8507	34541	16587	19672	49507
1976	214082	36489	21623	9439	10156	4379	9042	35231	17744	21406	48573
1977	217453	36675	21747	10019	9814	4196	9296	36228	18779	21266	49433
1978	216608	37057	21497	9997	9296	4426	9259	35974	19982	20711	48409
1979	223409	39344	21797	10171	9136	5073	9371	35837	21263	20737	50680
1980	230535	41939	22254	10265	9368	5900	9591	35817	22303	21580	51518
1981	234194	44817	22600	10491	9680	6465	9630	35454	22111	21544	51402
1982	236939	48687	23330	10873	10174	7908	9500	35226	20927	21103	49211
1983	243613	53516	24492	11466	10312	9267	9397	35187	20577	21319	48080
1984	246751	54768	25147	11283	10613	10108	9327	35826	20897	21588	47194
1985	250104	55686	25938	10883	11160	12374	8723	35860	21369	21324	46787
1986	259471	59862	27069	10916	11727	13389	8858	36826	21391	21981	47452
1987	264862	61194	27642	10151	12354	13578	8610	37734	22220	22680	48699
WOMEN											
1974	46278	1353	2534	1038	2019	505	870	9148	7388	7425	13998
1975	52222	1873	2680	1217	2121	599	1130	10021	8600	8318	15663
1976	57830	2038	2916	1503	2213	682	1423	10929	10249	9239	16638
1977	63150	2325	3051	1727	2133	676	1725	11854	11736	9662	18261
1978	67000	2900	3100	1900	2000	800	1900	12000	13000	9900	19700
1979	71075	3477	3330	2147	1996	910	2111	12769	14070	10125	20140
1980	75930	3923	3533	2335	2140	1232	2292	13184	14904	10962	21425
1981	78901	4639	3815	2452	2358	1465	2242	13354	15114	11371	22091
1982	79743	5242	4203	2665	2552	1968	2372	13882	14411	11499	20949
1983	81445	5805	4632	2826	2666	2208	2369	14038	14213	11721	20967
1984	83340	6227	4893	2732	2737	2374	2431	14457	14518	12304	20667
1985	84437	6466	5193	2721	2969	2627	2255	14625	14803	12452	20326
1986	88058	7160	5535	2818	3154	2856	2272	15324	14882	13134	20923
1987	90365	7367	5794	2603	3313	2833	2250	15813	15040	13660	21692
PERCENT WOMEN											
1974	23.7	4.0	11.9	12.4	20.2	13.5	11.4	28.4	48.5	39.4	31.4
1975	24.8	5.0	12.6	13.6	21.1	14.6	13.3	29.0	51.8	42.3	31.6
1976	27.0	5.6	13.5	15.9	21.8	15.6	15.7	31.0	57.8	43.2	34.3
1977	29.0	6.3	14.0	17.2	21.7	16.1	18.6	32.7	62.5	45.4	36.9
1978	30.9	7.8	14.4	19.0	21.5	18.1	20.5	33.4	65.1	47.8	40.7
1979	32.8	9.4	15.5	21.5	21.5	20.6	22.8	35.5	70.4	48.9	41.6
1980	34.0	10.0	16.2	23.0	23.4	24.3	24.5	36.8	70.1	52.9	42.3
1981	33.7	10.4	16.9	23.4	24.4	22.7	23.3	37.7	68.4	52.8	43.0
1982	33.7	10.8	18.0	24.5	25.1	24.9	25.0	39.4	68.9	54.5	42.6
1983	33.4	10.8	18.9	24.6	25.9	23.8	25.2	39.9	69.1	55.0	43.6
1984	33.8	11.4	19.5	24.2	25.8	23.5	26.1	40.4	69.5	57.0	43.8
1985	33.8	11.6	20.0	25.0	26.6	21.2	25.9	40.8	69.3	58.4	43.4
1986	33.9	12.0	20.4	25.8	26.9	21.3	25.6	41.6	69.6	59.8	44.1
1987	34.1	12.0	21.0	25.6	26.8	20.9	26.1	41.9	67.7	60.2	44.5

SOURCE: National Science Foundation SRS

TABLE 1-45

SCIENCE/ENGINEERING GRADUATE STUDENTS IN ALL INSTITUTIONS BY FIELD, CITIZENSHIP, AND RACE/ETHNICITY, FALL 1987

FIELD	TOTAL	U.S. CITIZENS						FOREIGN
		BLACK NON-HISPANIC	AMERICAN INDIAN/ ALASKAN NATIVE	ASIAN/ PACIFIC ISLANDER	HISPANIC	WHITE NON-HISPANIC	OTHER OR UNKNOWN	
TOTAL, ALL FIELDS	449,585	14,277	1,128	17,272	12,167	280,905	30,727	93,108
ENGINEERING	106,922	1,456	135	6,250	1,804	54,834	8,985	33,457
AEROSPACE	3,104	23	5	108	37	1,722	337	872
AGRICULTURAL	1,004	7	0	12	8	547	14	416
BIOMEDICAL	1,718	20	2	81	17	1,106	54	438
CHEMICAL	7,200	91	27	365	127	3,894	198	2,498
CIVIL	15,311	176	11	651	291	7,219	1,333	5,630
ELECTRICAL	31,264	412	21	2,539	516	14,514	3,380	9,880
ENGINEERING SCIENCE	2,368	36	6	98	22	1,418	108	680
INDUSTRIAL	13,973	307	30	510	306	8,603	1,181	3,035
MECHANICAL	16,182	175	23	830	272	7,969	1,519	5,393
METALLURGICAL/MATERIALS	4,309	23	2	296	48	2,199	112	1,629
MINING	513	2	0	4	7	267	18	215
NUCLEAR	1,279	11	2	38	15	707	26	480
PETROLEUM	850	4	1	32	18	425	22	348
ENGINEERING, N.E.C.	7,848	168	5	686	120	4,243	682	1,944
SCIENCES, TOTAL	342,663	12,822	993	11,022	10,363	226,071	21,742	59,651
PHYSICAL SCIENCES	33,203	560	48	1,264	610	18,268	1,900	10,552
ASTRONOMY	722	6	1	14	8	489	22	182
CHEMISTRY	19,110	390	31	840	425	10,828	1,305	5,290
PHYSICS	12,861	138	16	390	167	6,574	534	5,041
PHYSICAL SCIENCES, N.E.C.	510	26	0	20	10	377	38	39
ENVIRONMENTAL SCIENCES	14,744	92	23	227	253	11,047	948	2,154
ATMOSPHERIC SCIENCES	952	2	0	37	10	657	7	239
GEOSCIENCES	9,047	48	20	91	106	7,022	571	1,189
OCEANOGRAPHY	2,109	13	1	62	105	1,433	152	343
ENVIRONMENTAL SCIENCES, N.E.C.	2,636	29	2	37	32	1,936	218	383
MATHEMATICAL SCIENCES	19,061	445	47	789	284	9,606	1,607	6,284
COMPUTER SCIENCES	30,217	693	28	2,536	489	15,065	2,982	8,424
LIFE SCIENCES	108,641	3,326	315	3,175	3,044	77,710	5,731	15,341
AGRICULTURAL SCIENCES	10,948	138	29	166	235	7,298	230	2,854
BIOLOGICAL SCIENCES	48,838	1,050	118	1,805	1,083	33,568	2,233	8,980
ANATOMY	1,038	26	26	41	21	720	48	156
BIOCHEMISTRY	4,792	68	20	233	74	3,087	82	1,228
BIOLOGY	13,540	409	24	471	455	9,519	908	1,754
BIOMETRY/EPIDEMIOLOGY	1,523	63	10	74	37	1,031	8	300
BIOPHYSICS	591	7	0	41	15	318	60	150
BOTANY	3,169	35	5	72	35	2,112	50	860
CELL BIOLOGY	1,980	20	1	72	40	1,486	27	334
ECOLOGY	996	18	0	14	22	773	54	115
ENTOMOLOGY/PARASITOLOGY	1,244	13	3	23	23	812	47	323
GENETICS	1,273	15	2	37	11	939	17	252
MICROBIOLOGY	4,820	69	6	199	120	3,046	467	913
NUTRITION	4,180	110	4	153	46	2,627	148	1,093
PATHOLOGY	1,460	40	1	43	27	985	88	276
PHARMACOLOGY	2,078	38	4	96	40	1,472	33	395
PHYSIOLOGY	2,219	44	1	120	57	1,574	63	360
ZOOLOGY	2,104	32	8	22	25	1,726	39	252
BIOSCIENCES, N.E.C.	1,831	43	3	95	35	1,341	94	220
HEALTH SCIENCES	48,855	2,138	168	1,204	1,725	36,844	3,269	3,507
DENTISTRY	1,057	19	0	40	17	814	8	159
NEUROLOGY	479	7	1	19	9	373	4	66
NURSING	18,013	736	48	275	566	15,239	879	269
PHARMACEUTICAL SCIENCES	2,608	48	3	121	47	1,435	122	832
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	7,091	369	29	273	388	4,379	678	975
SPEECH PATHOLOGY/AUDIOLOGY	7,488	337	28	132	261	5,746	708	277
VETERINARY SCIENCES	736	30	0	12	6	512	9	167
CLINICAL MEDICINE, N.E.C.	2,121	81	4	109	61	1,397	143	326
HEALTH RELATED, N.E.C.	9,263	512	55	223	371	6,949	717	436
PSYCHOLOGY	44,912	2,014	170	840	1,879	35,670	2,740	1,600
SOCIAL SCIENCES	91,884	5,692	363	2,191	3,803	58,705	5,835	15,295
AGRICULTURAL ECONOMICS	2,193	57	4	31	45	1,158	57	841
ANTHROPOLOGY	5,887	102	37	97	154	4,468	371	658
ECONOMICS (EXCEPT AGRICULTURAL)	12,699	334	17	421	253	5,906	802	4,965
GEOGRAPHY	3,196	55	4	57	89	2,274	231	488
HISTORY AND PHILOSOPHY OF SCIENCE	325	6	0	10	3	248	10	48
LINGUISTICS	3,239	134	13	109	74	1,597	155	1,158
POLITICAL SCIENCE	28,890	2,382	101	701	1,633	18,413	2,103	3,757
SOCIOLOGY	7,020	453	36	183	263	4,241	287	1,556
SOCIOLOGY/ANTHROPOLOGY	1,000	118	2	10	12	515	177	166
SOCIAL SCIENCES, N.E.C.	27,435	2,051	149	573	1,477	19,884	1,642	1,659

1/ INCLUDES ESTIMATED DATA FOR MASTER'S-GRANTING INSTITUTIONS SURVEYED ON A SAMPLE BASIS. SEE TECHNICAL NOTES FOR FURTHER INFORMATION.

SOURCE: National Science Foundation SRS

TABLE 1-46

FULL-TIME SCIENCE/ENGINEERING GRADUATE STUDENTS IN DOCTORATE-GRANTING INSTITUTIONS BY FIELD, CITIZENSHIP, AND RACE/ETHNICITY, FALL 1987

FIELD	TOTAL	U.S. CITIZENS						FOREIGN
		BLACK NON-HISPANIC	AMERICAN INDIAN/ ALASKAN NATIVE	ASIAN/ PACIFIC ISLANDER	HISPANIC	WHITE NON-HISPANIC	OTHER OR UNKNOWN	
TOTAL, ALL FIELDS	264,862	6,025	627	9,713	6,528	155,651	10,136	76,182
ENGINEERING	61,194	671	65	3,121	838	26,204	2,956	27,339
AEROSPACE	2,355	21	4	72	24	1,160	266	808
AGRICULTURAL	837	7	0	10	7	437	4	372
BIOMEDICAL	1,360	18	2	61	13	871	15	380
CHEMICAL	5,649	63	26	285	89	2,757	129	2,300
CIVIL	9,654	82	6	359	158	4,126	376	4,547
ELECTRICAL	16,431	216	3	1,170	250	6,257	833	7,702
ENGINEERING SCIENCE	1,369	8	2	35	8	639	85	592
INDUSTRIAL	4,936	81	5	194	104	2,059	263	2,230
MECHANICAL	9,867	88	11	448	101	4,027	708	4,484
METALLURGICAL/MATERIALS	3,371	16	2	219	30	1,527	45	1,532
MINING	406	1	0	4	5	194	10	192
NUCLEAR	1,044	10	2	31	12	519	20	450
PETROLEUM	624	3	1	11	6	274	15	314
ENGINEERING, N.E.C.	3,291	57	1	222	31	1,357	187	1,436
SCIENCES, TOTAL	203,668	5,354	562	6,592	5,690	129,447	7,180	48,843
PHYSICAL SCIENCES	27,642	328	35	989	495	14,790	1,371	9,634
ASTRONOMY	681	5	1	14	7	461	21	172
CHEMISTRY	15,664	222	21	634	356	8,786	932	4,713
PHYSICS	11,075	93	13	330	130	5,392	388	4,729
PHYSICAL SCIENCES, N.E.C.	222	8	0	11	2	151	30	20
ENVIRONMENTAL SCIENCES	10,151	63	14	176	193	7,414	417	1,874
ATMOSPHERIC SCIENCES	822	2	0	35	10	552	4	219
GEOSCIENCES	6,410	35	11	78	72	4,905	245	1,064
OCEANOGRAPHY	1,603	7	1	51	97	1,017	134	296
ENVIRONMENTAL SCIENCES, N.E.C.	1,316	19	2	12	14	940	34	295
MATHEMATICAL SCIENCES	12,354	211	20	454	186	5,631	567	5,285
COMPUTER SCIENCES	13,578	247	11	941	142	5,949	660	5,628
LIFE SCIENCES	68,564	1,491	197	2,243	1,979	47,379	2,039	13,236
AGRICULTURAL SCIENCES	8,610	87	12	147	166	5,551	106	2,541
BIOLOGICAL SCIENCES	37,734	629	93	1,416	810	25,673	1,144	7,969
ANATOMY	951	22	23	36	21	651	45	153
BIOCHEMISTRY	4,591	64	19	218	65	2,970	62	1,193
BIOLOGY	7,719	132	7	258	284	5,457	275	1,306
BIOMETRY/EPIDEMIOLOGY	1,138	53	9	60	25	717	7	267
BIOPHYSICS	468	5	0	31	15	274	18	125
BOTANY	2,674	29	5	65	29	1,752	37	757
CELL BIOLOGY	1,902	19	1	71	37	1,422	24	328
ECOLOGY	784	8	0	12	14	597	44	109
ENTOMOLOGY/PARASITOLOGY	1,062	12	3	13	23	691	25	295
GENETICS	1,167	15	2	35	10	849	15	241
MICROBIOLOGY	4,339	61	6	168	113	2,736	390	865
NUTRITION	2,894	59	3	120	30	1,713	40	929
PATHOLOGY	1,138	21	1	39	14	783	30	250
PHARMACOLOGY	1,928	36	4	95	37	1,360	18	378
PHYSIOLOGY	2,002	41	1	114	49	1,403	44	350
ZOOLOGY	1,775	24	7	21	23	1,446	31	223
BIOSCIENCES, N.E.C.	1,202	28	2	60	21	852	39	200
HEALTH SCIENCES	22,220	775	92	680	1,003	16,155	789	2,726
DENTISTRY	909	17	0	39	15	688	5	145
NEUROLOGY	455	6	1	19	8	351	4	66
NURSING	5,469	177	18	90	309	4,612	106	157
PHARMACEUTICAL SCIENCES	1,824	33	2	83	33	938	42	693
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	3,913	196	21	189	257	2,184	293	773
SPEECH PATHOLOGY/AUDIOLOGY	4,120	151	22	81	141	3,340	175	210
VETERINARY SCIENCES	560	10	0	10	5	378	4	153
CLINICAL MEDICINE, N.E.C.	1,330	40	3	63	37	867	99	221
HEALTH RELATED, N.E.C.	3,640	145	25	106	198	2,797	61	308
PSYCHOLOGY	22,680	816	83	493	973	18,587	639	1,089
SOCIAL SCIENCES	48,699	2,198	202	1,296	1,722	29,697	1,487	12,097
AGRICULTURAL ECONOMICS	1,822	36	3	29	36	956	49	713
ANTHROPOLOGY	4,042	72	24	78	110	3,032	142	584
ECONOMICS (EXCEPT AGRICULTURAL)	8,791	170	5	275	161	3,758	317	4,105
GEOGRAPHY	2,074	26	3	33	33	1,483	85	411
HISTORY AND PHILOSOPHY OF SCIENCE	288	5	0	8	3	216	10	46
LINGUISTICS	2,453	90	9	85	48	1,222	38	961
POLITICAL SCIENCE	11,922	608	46	381	508	7,310	357	2,712
SOCIOLOGY	4,756	212	28	136	150	2,832	116	1,282
SOCIOLOGY/ANTHROPOLOGY	527	50	1	7	9	309	28	123
SOCIAL SCIENCES, N.E.C.	12,024	929	83	264	664	8,579	345	1,160

SOURCE: National Science Foundation SRS

TABLE 1-47

FOREIGN FULL-TIME SCIENCE/ENGINEERING GRADUATE STUDENTS IN ALL INSTITUTIONS BY FIELD 1980-87

FIELD	NUMBER								AVERAGE ANNUAL PERCENT CHANGE	
	1980	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1980-86	1986-
TOTAL, ALL FIELDS	50,730	54,979	57,923	62,777	64,622	69,004	75,832	79,145	6.9	4.
ENGINEERING	17,999	19,814	21,423	23,044	23,616	24,347	27,310	28,122	7.2	3.
AEROSPACE	568	601	577	752	736	733	810	814	6.1	.
AGRICULTURAL	293	298	341	341	327	353	424	372	6.4	-12.
BIOMEDICAL	135	158	199	195	220	194	280	380	12.9	35.
CHEMICAL	1,990	2,202	2,341	2,239	2,152	2,201	2,174	2,326	1.5	7.
CIVIL	3,375	3,740	4,050	4,388	4,495	4,501	4,780	4,600	6.0	-3.
ELECTRICAL	4,297	4,785	5,112	5,840	6,050	6,681	7,724	7,969	10.3	3.
ENGINEERING SCIENCE	363	372	440	495	484	469	591	595	8.5	.
INDUSTRIAL	1,456	1,595	1,626	1,522	1,695	1,834	2,041	2,382	5.8	16.
MECHANICAL	2,630	3,059	3,500	4,003	4,088	3,989	4,539	4,565	9.5	.
METALLURGICAL/MATERIALS	1,107	1,112	1,181	1,174	1,209	1,288	1,510	1,544	5.3	2.
MINING	139	155	122	155	141	135	192	196	5.5	2.
NUCLEAR	443	427	473	461	412	430	445	450	.1	1.
PETROLEUM	213	195	260	290	287	250	267	323	3.8	21.
ENGINEERING, N.E.C.	990	1,115	1,201	1,189	1,320	1,291	1,533	1,607	7.6	4.
SCIENCES, TOTAL	32,731	35,165	36,500	39,733	41,006	44,656	48,523	51,023	6.8	5.
PHYSICAL SCIENCES	5,744	6,271	6,485	7,232	7,603	8,460	9,441	9,874	8.6	4.
ASTRONOMY	84	93	102	105	117	150	160	172	11.3	7.
CHEMISTRY	2,983	3,217	3,216	3,525	3,615	4,085	4,486	4,874	7.0	8.
PHYSICS	2,665	2,950	3,157	3,584	3,850	4,199	4,769	4,809	10.2	.
PHYSICAL SCIENCES, N.E.C.	12	11	10	18	21	25	25	20	13.0	-20.
ENVIRONMENTAL SCIENCES	1,399	1,506	1,647	1,697	1,590	1,695	1,813	1,888	4.4	4.
ATMOSPHERIC SCIENCES	144	179	187	182	164	196	206	219	6.1	6.
GEOSCIENCES	816	885	913	923	889	948	1,015	1,074	3.7	5.
OCEANOGRAPHY	208	246	340	377	297	312	309	296	6.8	-4.
ENVIRONMENTAL SCIENCES, N.E.C.	231	194	207	215	240	239	283	299	3.4	5.
MATHEMATICAL SCIENCES	3,254	3,641	3,888	4,242	4,592	4,883	5,182	5,531	8.1	6.
COMPUTER SCIENCES	2,066	2,558	3,190	3,963	4,423	5,454	5,978	6,170	19.4	3.
LIFE SCIENCES	8,866	9,381	9,732	10,420	10,762	11,348	12,593	13,628	6.0	8.
AGRICULTURAL SCIENCES	2,226	2,375	2,383	2,468	2,445	2,338	2,548	2,605	2.3	2.
BIOLOGICAL SCIENCES	4,588	4,852	5,039	5,523	5,887	6,431	7,304	8,185	8.1	12.
ANATOMY	83	86	88	74	58	91	121	153	6.5	26.
BIOCHEMISTRY	509	594	658	775	843	972	1,095	1,195	13.6	9.
BIOLOGY	868	883	851	993	1,173	1,161	1,326	1,446	7.3	9.
BIOMETRY/EPIDEMIOLOGY	144	160	150	157	123	173	228	267	8.0	17.
BIOPHYSICS	56	61	70	80	80	93	120	125	13.5	4.
BOTANY	535	539	595	612	623	629	762	789	6.1	3.
CELL BIOLOGY	67	82	103	128	147	189	275	328	26.5	19.
ECOLOGY	67	73	80	78	87	100	99	109	6.7	10.
ENTOMOLOGY/PARASITOLOGY	227	263	227	240	224	234	252	295	1.8	17.
GENETICS	98	92	114	145	131	163	202	241	12.8	19.
MICROBIOLOGY	418	418	435	512	553	651	724	870	9.6	20.
NUTRITION	781	834	841	821	895	937	906	965	2.5	6.
PATHOLOGY	163	184	174	206	169	189	204	250	3.8	22.
PHARMACOLOGY	186	199	243	235	241	250	318	378	9.4	18.
PHYSIOLOGY	171	180	188	212	255	265	323	350	11.2	8.
ZOOLOGY	136	130	131	142	144	178	188	223	5.5	18.
BIOSCIENCES, N.E.C.	79	74	91	113	142	156	161	200	12.6	24.
HEALTH SCIENCES	2,052	2,154	2,310	2,429	2,430	2,579	2,741	2,839	4.9	3.
DENTISTRY	223	173	129	122	130	155	179	145	-3.6	-19.
NEUROLOGY	15	15	14	27	29	34	48	66	21.4	37.
NURSING	181	225	202	159	178	175	156	161	-2.4	3.
PHARMACEUTICAL SCIENCES	463	539	587	629	645	647	691	693	6.9	.
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	584	580	695	672	638	778	779	801	4.9	2.
SPEECH PATHOLOGY/AUDIOLOGY	209	224	213	259	206	220	234	224	1.9	-4.
VETERINARY SCIENCES	113	118	93	111	110	133	138	153	3.4	10.
CLINICAL MEDICINE, N.E.C.	106	116	150	168	121	193	227	256	13.5	13.
HEALTH RELATED, N.E.C.	158	164	227	282	373	243	289	340	10.6	17.
PSYCHOLOGY	1,210	1,004	1,079	1,092	1,089	1,212	1,232	1,232	.3	*
SOCIAL SCIENCES	10,192	10,806	10,479	11,087	10,948	11,605	12,284	12,700	3.2	3.
AGRICULTURAL ECONOMICS	754	770	702	765	764	766	757	736	.1	-2.
ANTHROPOLOGY	396	428	386	402	384	444	535	584	5.1	9.
ECONOMICS (EXCEPT AGRICULTURAL)	3,499	3,674	3,554	3,560	3,539	3,980	4,097	4,286	2.7	4.
GEOGRAPHY	383	370	391	386	374	355	384	423	*	9.
HISTORY AND PHILOSOPHY OF SCIENCE	25	30	35	40	42	57	39	46	7.7	17.
LINGUISTICS	743	753	710	850	838	943	968	998	4.5	3.
POLITICAL SCIENCE	2,356	2,509	2,519	2,751	2,584	2,551	2,910	2,869	3.6	-1.
SOCIOLOGY	924	1,044	985	1,101	1,070	1,211	1,252	1,350	5.2	7.
SOCIOLOGY/ANTHROPOLOGY	103	101	134	129	123	128	125	127	3.3	1.
SOCIAL SCIENCES, N.E.C.	1,009	1,127	1,063	1,103	1,230	1,171	1,216	1,284	3.2	5.

1/ INCLUDES ESTIMATED DATA FOR MASTER'S-GRANTING INSTITUTIONS SURVEYED ON A SAMPLE BASIS BEGINNING IN 1984. SEE TECHNICAL NOTES FOR FURTHER INFORMATION.

* LESS THAN 0.05-PERCENT CHANGE

SOURCE: Selected Data on Graduate Science/Engineering Students and Postdoctorates, Fall 1987, National Science Foundation

TABLE 1-48

FULL-TIME SCIENCE AND ENGINEERING GRADUATE STUDENTS IN ALL INSTITUTIONS BY SEX, SOURCE OF MAJOR SUPPORT, AND AREA OF STUDY, 1987

	Total Science/Eng		% Change	Engineering		Physical Sciences		Environmental Sciences		Mathematical Sciences		Computer Sciences		Life Sciences		Psychology		Social Sciences	
	No.	%	'86-87	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MEN																			
All Sources	184,269	100.0	1.7	55,605	100.0	22,318	100.0	7,808	100.0	9,522	100.0	11,887	100.0	36,938	100.0	10,838	100.0	29,353	100.0
Federal Total	37,263	20.2	4.2	11,622	20.9	7,830	35.1	2,167	27.8	897	9.4	1777	14.9	10,405	28.2	849	7.8	1,716	5.8
DoD	7,622	4.1	10.3	4,181	7.5	1,087	4.9	410	5.3	367	3.9	995	8.4	328	0.9	85	0.8	169	0.6
HHS Total	9,085	4.9	10.5	470	0.8	1,515	6.8	37	0.5	24	0.3	58	0.5	6,403	17.3	385	3.6	193	0.7
NIH	7,929	4.3	10.0	378	0.7	1,390	6.2	15	0.2	19	0.2	57	0.5	5,713	15.5	250	2.3	107	0.4
Other	1,156	0.6	14.3	92	0.2	125	0.6	22	0.3	5	0.1	1	0.0	690	1.9	135	1.2	86	0.3
NSF	8,943	4.9	3.5	3,073	5.5	2,960	13.3	944	12.1	361	3.8	533	4.5	752	2.0	101	0.9	219	0.7
All Other Federal	11,614	6.3	-3.2	3,898	7.0	2,269	10.2	776	9.9	145	1.5	191	1.6	2,922	7.9	278	2.6	1,135	3.9
Institutional	75,350	40.9	3.3	18,960	34.1	11,371	50.9	2,959	37.9	6,281	66.0	3922	33.0	14,855	40.2	4,269	39.4	12,733	43.4
Other Outside	19,995	10.9	-4.8	8,834	15.9	1,496	6.7	820	10.5	468	4.9	1022	8.6	4,211	11.4	577	5.3	2,567	8.7
All Other U.S.	13,899	7.5	-4.2	6,826	12.3	1,259	5.6	534	6.8	193	2.0	775	6.5	2,510	6.8	540	5.0	1,262	4.3
Foreign	6,095	3.3	-6.2	2,008	3.6	237	1.1	286	3.7	275	2.9	247	2.1	1,701	4.6	36	0.3	1,305	4.4
Self Support	51,660	28.0	0.5	16,188	29.1	1,620	7.3	1,862	23.8	1,876	19.7	5166	43.5	7,467	20.2	5,144	47.5	12,337	42.0
WOMEN																			
All Sources	100,933	100.0	3.6	7,628	100.0	6,051	100.0	2,692	100.0	3,563	100.0	3,158	100.0	35,448	100.0	17,369	100.0	25,024	100.0
Federal Total	17,353	17.7	2.5	1,440	18.9	1,855	30.7	699	26.0	194	5.4	254	8.0	10,148	28.6	1,172	6.7	1,591	6.4
DoD	1,168	1.2	16	372	4.9	207	3.4	72	2.7	71	2.0	119	3.8	217	0.6	69	0.4	41	0.2
HHS Total	8,861	9.0	1.4	132	1.7	561	9.3	20	0.7	6	0.2	4	0.1	7,119	20.1	610	3.5	409	1.6
NIH	5,548	5.7	10.6	112	1.5	513	8.5	8	0.3	5	0.1	4	0.1	4,331	12.2	372	2.1	203	0.8
Other	3,313	3.4	-11	20	0.3	48	0.8	12	0.4	1	0.0	0	0.0	2,788	7.9	238	1.4	206	0.8
NSF	2,287	2.3	3.1	367	4.8	637	10.5	316	11.7	75	2.1	90	2.8	521	1.5	139	0.8	142	0.6
All Other Federal	5,039	5.1	1.2	569	7.5	451	7.5	291	10.8	42	1.2	41	1.3	2,292	6.5	354	2.0	999	4.0
Institutional	38,902	38.7	1.7	2,680	35.1	3,338	55.2	1,181	43.9	2,496	[illegible]	994	31.5	12,241	34.5	6,604	38.0	9,368	37.4
Other Outside	6,518	6.4	-0.4	1,110	14.6	388	6.4	201	7.5	123	3.5	291	9.2	2,252	6.4	737	4.2	1,416	5.7
All Other U.S.	5,293	5.2	0.1	987	12.9	351	5.8	158	5.9	65	1.8	236	7.5	1,738	4.9	716	4.1	1,042	4.2
Foreign	1,234	1.2	-2.4	123	1.6	37	0.6	43	1.6	58	1.6	54	1.7	514	1.5	31	0.2	374	1.5
Self Support	38,149	37.3	6.8	2,398	31.4	469	7.8	611	22.7	750	21.0	1620	51.3	10,806	30.5	8,846	50.9	12,649	50.5

SOURCE: Doctorate Recipients from United States Universities, Summary Report, 1987
National Research Council

TABLE 1-49

PRIMARY SOURCES OF SUPPORT FOR PHD RECIPIENTS BY CITIZENSHIP, RACE/ETHNICITY AND BROAD FIELD, 1987

	FIELD OF PhD							
SOURCE/STATUS	Total Fields	Phys. Sci.	Engineering	Life Sci.	Social Sci.	Humanities	Education	Prof/ Other
Personal								
U.S.	49.2	16.1	19.5	28.3	60.1	50.9	79.4	60.4
Permanent Visa	33.9	12.0	19.0	27.5	49.2	46.9	61.9	55.3
Temporary Visa	15.4	5.5	9.8	13.6	21.4	29.2	42.5	27.7
Asian	30.4	6.7	21.0	23.1	56.7	54.5	77.1	60.0
Black	64.2	37.5	0.0	38.3	46.3	45.5	82.1	60.0
Hispanic	51.7	10.5	18.2	28.8	60.0	54.8	70.9	65.2
White	49.1	16.0	19.2	28.2	60.7	50.8	79.6	60.5
Federal, Non-R.A.								
U.S.	6.7	4.2	8.2	18.3	5.0	2.8	2.9	3.8
Permanent Visa	1.7	0.5	0.3	6.4	0.5	0.7	2.9	0.0
Temporary Visa	1.9	1.1	0.9	4.0	3.7	2.7	1.4	1.2
Asian	10.1	4.5	4.2	19.4	15.0	9.1	5.7	0.0
Black	6.9	0.0	18.2	20.0	11.1	5.5	3.2	9.1
Hispanic	10.1	8.8	18.2	18.2	10.4	4.1	10.1	0.0
White	6.5	4.1	8.5	18.3	4.4	2.7	2.6	3.5
R.A., Fed. & Univ.								
U.S.	18.3	45.5	45.3	30.4	10.7	1.8	3.3	6.4
Permanent Visa	29.7	45.8	55.6	33.9	9.0	0.7	10.8	13.8
Temporary Visa	33.8	43.4	52.6	33.3	13.3	1.9	8.4	13.7
Asian	34.0	49.4	49.4	35.8	10.0	0.0	5.7	13.3
Black	6.1	16.7	36.4	20.0	8.3	0.0	2.6	3.6
Hispanic	11.3	36.8	27.3	24.2	5.6	1.4	4.4	4.3
White	18.5	45.9	45.5	30.6	11.0	1.8	3.3	6.3
Teaching Assistant								
U.S.	15.3	24.5	9.3	13.1	15.1	30.6	5.9	17.1
Permanent Visa	20.1	31.0	15.7	11.9	25.6	31.5	5.0	23.4
Temporary Visa	21.4	34.5	13.8	11.2	26.1	39.0	8.7	21.0
Asian	13.3	24.7	11.8	9.7	11.7	13.6	5.7	13.3
Black	8.4	16.7	9.1	8.3	13.9	23.6	3.5	9.1
Hispanic	12.6	26.3	4.5	18.2	9.6	26.0	1.9	17.4
White	15.7	24.8	9.2	13.3	15.5	31.3	6.2	17.9
Fellowship								
U.S.	5.5	5.5	9.1	6.0	5.1	10.9	1.9	4.7
Permanent Visa	5.9	6.5	2.3	8.9	5.5	12.6	3.6	2.1
Temporary Visa	7.2	5.1	3.3	9.0	12.8	12.5	8.7	9.7
Asian	7.2	11.2	7.6	3.7	6.7	18.2	0.0	13.3
Black	9.0	16.7	27.3	13.3	9.3	25.5	4.1	10.9
Hispanic	10.1	12.3	27.3	9.1	12.0	9.6	7.0	4.3
White	5.1	5.1	8.6	5.7	4.7	10.4	1.6	4.3
Foreign Government								
Permanent Visa	4.0	2.8	1.0	6.4	4.0	4.2	9.4	2.1
Temporary Visa	12.6	6.8	13.5	17.7	12.6	9.1	17.2	14.6

SOURCE: Doctorate Records File of the National Research Council

TABLE 2-1

PHD AWARDS BY FIELD, DECADE AND SEX, 1920-1988

	DECADE							TOTAL
	1920-29	1930-39	1940-49	1950-59	1960-69	1970-79	1980-88	1920-88
All Fields (1)	11919	25654	30575	80262	162019	318100	284497	913026
Physical Sciences	3271	6687	8202	18745	34307	48182	41122	160516
Engineering	228	833	1439	5765	19042	29683	27793	84783
Life Sciences	2370	5081	5822	14495	26461	49344	50989	154562
Social Sciences*	1898	3556	4001	13692	25120	59762	54006	162035
Total S/E	7767	16157	19464	52697	104930	186971	173910	561896
Humanities	2408	5265	5168	11361	22685	46541	32136	125564
Professional Flds.	551	1018	1179	2717	6474	14128	15816	41883
Education	1153	3122	4759	13479	27531	70460	62333	182837
	WOMEN							
All Fields (1)	1826	3784	4115	7972	18964	66202	95564	198427
Physical Sciences	247	442	406	685	1577	3946	6050	13353
Engineering	2	6	7	20	77	424	1540	2076
Life Sciences	378	765	738	1318	3078	8921	15911	31109
Social Sciences*	325	562	580	1510	3604	14641	21434	42656
Total S/E	952	1775	1731	3533	8336	27932	44935	89194
Humanities	619	1291	1182	1758	4423	14625	13903	37801
Professional Flds.	38	78	113	249	798	2387	4999	8662
Education	209	615	1086	2431	5367	21258	31622	62588
	PERCENT WOMEN							
All Fields (1)	15.3	14.8	13.5	9.9	11.7	20.8	33.6	21.7
Physical Sciences	7.6	6.6	5.0	3.7	4.6	8.2	14.7	8.3
Engineering	0.9	0.7	0.5	0.3	0.4	1.4	5.5	2.4
Life Sciences	15.9	15.1	12.7	9.1	11.6	18.1	31.2	20.1
Social Sciences*	17.1	15.8	14.5	11.0	14.3	24.5	39.7	26.3
Total S/E	12.3	11.0	8.9	6.7	7.9	14.9	25.8	15.9
Humanities	25.7	24.5	22.9	15.5	19.5	31.4	43.3	30.1
Professional Flds.	6.9	7.7	9.6	9.2	12.3	16.9	31.6	20.7
Education	18.1	19.7	22.8	18.0	19.5	30.2	50.7	34.2

(1) Includes other and unspecified. * Includes Psychology

SOURCE: Summary Report 1987 and 1988 Doctorate Recipients from United States Universities, National Research Council

TABLE 2-2

DOCTORATE RECIPIENTS, 1987

FIELD	TOTAL	WOMEN	FOREIGN-TEMP.VISA	U. S. & PERMANENT VISA INDIAN	ASIAN	BLACK	HISPANIC
PHYSICAL SCIENCES	**5,027**	**830**	**1,363**	**10**	**228**	**35**	**76**
Mathematics	740	125	301	0	41	11	11
Computer Sciences	450	65	142	3	26	2	4
Physics/Astronomy	1,236	120	397	1	35	7	12
Chemistry	1,974	406	399	6	108	13	44
Earth/Atmos./Marine	627	100	124	0	18	2	5
ENGINEERING	**3,716**	**225**	**1,532**	**7**	**326**	**25**	**34**
LIFE SCIENCES	**5,742**	**2,020**	**917**	**16**	**249**	**107**	**90**
Biological	3,824	1,350	489	11	169	60	62
Health	806	477	96	3	35	31	11
Agricultural	1,112	193	332	2	45	16	17
SOCIAL SCIENCES	**2,620**	**797**	**567**	**6**	**96**	**76**	**64**
PSYCHOLOGY	**3,098**	**1,652**	**83**	**16**	**47**	**92**	**95**
HUMANITIES	**3,504**	**1,574**	**327**	**11**	**60**	**81**	**122**
PROFESSIONAL FIELDS	**2,063**	**679**	**371**	**8**	**60**	**73**	**26**
EDUCATION	**6,447**	**3,550**	**418**	**41**	**95**	**413**	**202**
TOTAL ALL FIELDS	**32,278**	**11,370**	**5,593**	**115**	**1,162**	**904**	**709**

TABLE 2-3

DOCTORATE RECIPIENTS, 1988

FIELD	TOTAL	WOMEN	FOREIGN TEMP.	U. S. CITIZEN & PERM. VISA INDIAN	ASIAN	BLACK	HISP.
PHYSICAL SCIENCES	**5,309**	**880**	**1,477**	**11**	**229**	**41**	**76**
Mathematics	749	121	304	2	33	3	4
Computer Sciences	514	56	174	1	44	2	2
Physics/Astronomy	1,302	130	421	1	52	12	14
Chemistry	2,018	429	441	5	85	21	48
Earth/Atmos./Marine	726	144	137	2	15	3	8
ENGINEERING	**4,190**	**286**	**1,723**	**4**	**332**	**31**	**63**
LIFE SCIENCES	**6,143**	**2,261**	**1,062**	**18**	**232**	**103**	**109**
Biological	4,106	1,501	553	6	170	48	76
Health	867	543	116	5	30	31	12
Agricultural	1,170	217	393	7	32	24	21
SOCIAL SCIENCES	**2,711**	**921**	**623**	**5**	**96**	**95**	**55**
PSYCHOLOGY	**3,058**	**1,675**	**84**	**7**	**47**	**100**	**93**
HUMANITIES	**3,553**	**1,574**	**346**	**7**	**69**	**88**	**112**
PROFESSIONAL FIELDS	**2,092**	**672**	**374**	**6**	**97**	**85**	**25**
EDUCATION	**6,717**	**3,507**	**479**	**35**	**130**	**408**	**159**
TOTAL ALL FIELDS	**33,456**	**11,790**	**6,176**	**93**	**1,233**	**951**	**693**

NOTE: Totals includes "other and unknown."

TABLE 2-4

SCIENCE/ENGINEERING PhD AWARDS BY CITIZENSHIP AND VISA TYPE, 1960 - 1988

YEAR	TOTAL	U.S. Number	U.S. %	FOREIGN TOTAL	FOREIGN TOTAL %	Immigrant	Immigrant %	Non-Immigrant	Non-Immigrant %	Citizenship Unknown
1960	6,316	5,301	83.9	966	15.3	223	3.5	743	11.8	49
1961	6,757	5,632	83.4	1,032	15.3	182	2.7	850	12.6	93
1962	7,493	6,231	83.2	1,174	15.7	138	1.8	1,036	13.8	88
1963	8,279	6,884	83.2	1,258	15.2	234	2.8	1,024	12.4	137
1964	9,297	7,625	82.0	1,488	16.0	294	3.2	1,194	12.8	184
1965	10,542	8,590	81.5	1,797	17.0	357	3.4	1,440	13.7	155
1966	11,537	9,263	80.3	1,978	17.1	369	3.2	1,609	13.9	296
1967	13,065	10,561	80.8	2,253	17.2	568	4.3	1,685	12.9	251
1978	14,526	11,808	81.3	2,489	17.1	678	4.7	1,811	12.5	229
1969	16,075	13,080	81.4	2,721	16.9	842	5.2	1,879	11.7	274
1970	17,840	14,494	81.2	3,165	17.7	1,136	6.4	2,029	11.4	181
1971	19,078	15,300	80.2	3,514	18.4	1,411	7.4	2,103	11.0	264
1972	19,127	15,005	78.4	3,812	19.9	1,632	8.5	2,180	11.4	310
1973	19,121	14,788	77.3	4,004	20.9	1,565	8.2	2,439	12.8	329
1974	18,460	13,560	73.5	4,050	21.9	1,388	7.5	2,662	14.4	850
1975	18,488	14,107	76.3	4,015	21.7	1,257	6.8	2,758	14.9	366
1976	18,089	13,947	77.1	3,762	20.8	1,049	5.8	2,713	15.0	380
1977	17,641	13,538	76.7	3,609	20.5	982	5.6	2,627	14.9	494
1978	17,034	13,009	76.4	3,472	20.4	970	5.7	2,502	14.7	553
1979	17,230	13,195	76.6	3,526	20.5	924	5.4	2,602	15.1	509
1980	18,171	13,901	76.5	3,743	20.6	969	5.3	2,774	15.3	527
1981	18,662	14,090	75.5	3,919	21.0	927	5.0	2,992	16.0	653
1982	18,747	13,854	73.9	4,082	21.8	886	4.7	3,196	17.0	811
1983	18,799	13,742	73.1	4,361	23.2	921	4.9	3,440	18.3	696
1984	19,008	13,686	72.0	4,562	24.0	855	4.5	3,707	19.5	760
1985	19,164	13,300	69.4	5,002	26.1	939	4.9	4,063	21.2	862
1986	19,745	13,269	67.2	5,173	26.2	1,007	5.1	4,166	21.1	1,303
1987	20,203	13,213	65.4	5,576	27.6	1,114	5.5	4,462	22.1	1,414
1988	21,411	13,702	64.0	6,112	28.5	1,143	5.3	4,969	23.2	1,597
TOTAL	459,905	348,675	76.4	96,615	20.6	24,960	5.4	71,655	15.2	14,615

SOURCE: Summary Reports: Doctorate Recipients from United States Universities, 1962, 1966, 1970, 1974, 1980, 1984, 1986, 1987, and 1988 National Research Council

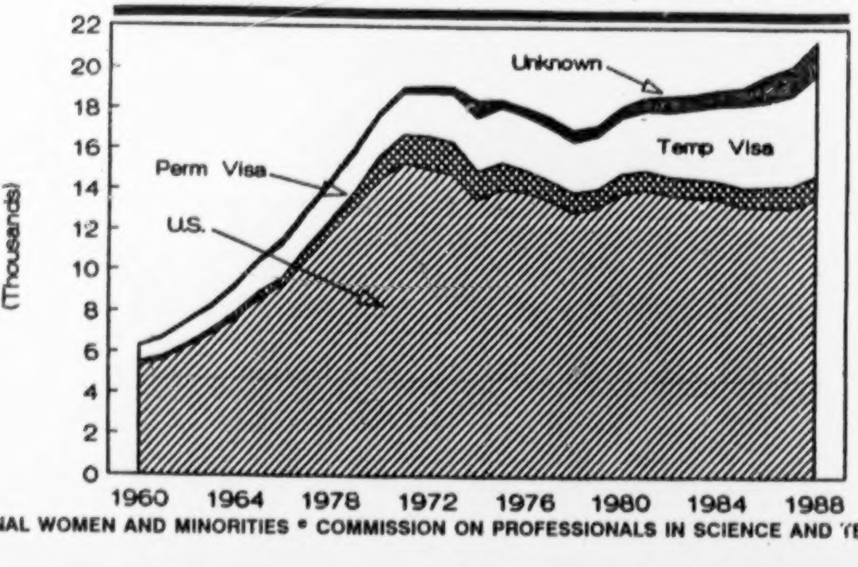
TABLE 2-5

DOCTORAL RECIPIENTS WHO ARE U.S. CITIZENS OR HAVE PERMANENT VISAS BY FIELD AND RACIAL/ETHNIC GROUP, 1988

FIELD	Total	Am Ind. No.	Am Ind. %	Asian No.	Asian %	Black No.	Black %	Hispanic No.	Hispanic %	White No.	White %
ALL FIELDS	22799	93	0.4	612	2.7	805	3.5	594	2.6	20695	90.7
PHYSICAL SCIENCES	3136	11	0.4	111	3.5	32	1.0	69	2.2	2,913	92.9
Physics & Astronomy	689	1	0.1	19	2.8	11	1.6	13	1.9	645	93.6
Chemistry	1343	5	0.4	47	3.5	17	1.3	43	3.2	1,231	91.7
Earth, Atmos, & Marine	496	2	0.4	8	1.6	2	0.4	8	1.6	476	96.0
Mathematics	331	2	0.6	17	5.1	1	0.3	3	0.9	308	93.1
Computer Science	277	1	0.4	20	7.2	1	0.4	2	0.7	253	91.3
ENGINEERING	1734	4	0.2	141	19.0	19	43.0	43	2.5	1,527	88.1
LIFE SCIENCES	4319	18	0.4	127	2.9	71	1.6	84	1.9	4,019	93.1
Biological Sciences	3070	6	0.2	100	3.3	36	1.2	61	2.0	2,867	93.4
Health Sciences	642	5	0.8	16	2.5	25	3.9	10	1.6	586	91.3
Agricultural Sciences	607	7	1.2	11	1.8	10	1.6	13	2.1	566	93.2
SOCIAL SCIENCES (ex Psych	1641	5	0.3	48	2.9	62	3.8	44	2.7	1,482	90.3
Psychology	2611	7	0.3	37	1.4	96	3.7	89	3.4	2382	91.2
HUMANITIES	2743	7	0.3	37	1.3	77	2.8	94	3.4	2528	92.2
PROFESSIONAL FIELDS	1391	6	0.4	29	2.1	78	5.6	19	1.4	1,259	90.5
EDUCATION	5214	35	0.7	82	1.6	370	7.1	152	2.9	4,575	87.7

CHART 2-1

SCIENCE & ENGINEERING PhDs BY CITIZENSHIP & VISA TYPE, 1960-88



SOURCE: Summary Reports: Doctorate Recipients from United States Universities, 1975 - 1988, National Research Council

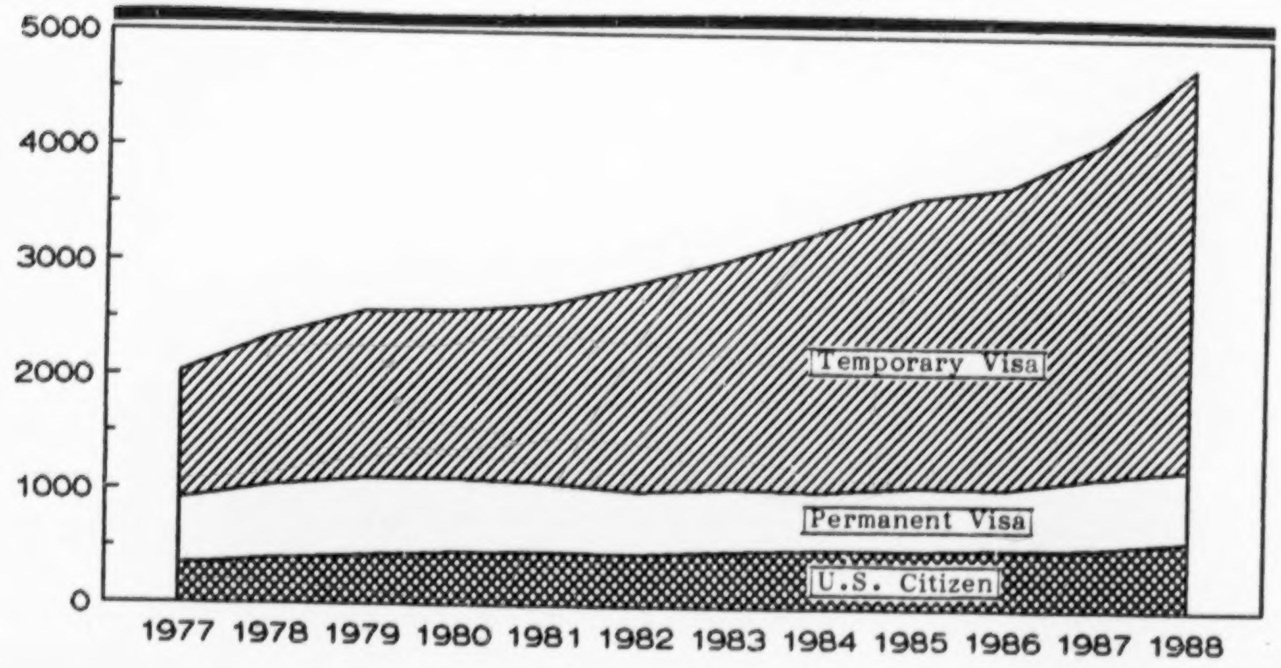
TABLE 2-6

CITIZENSHIP OF ASIAN PHD RECIPIENTS, BY VISA TYPE, 1977-88

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
MEN												
U.S.	251	287	311	313	315	281	312	338	329	348	367	413
Permanent Visas	488	531	564	513	499	444	431	389	437	415	453	457
Temporary Visas	955	1,114	1,253	1,282	1,341	1,567	1,731	1,982	2,137	2,256	2,498	2,949
WOMEN												
U.S.	88	103	117	145	150	171	180	174	187	181	173	199
Permanent Visas	83	111	110	131	109	108	120	118	116	111	169	164
Temporary Visas	163	197	210	190	223	262	275	313	389	387	428	561
TOTAL												
U.S.	339	390	428	458	465	452	492	512	516	529	540	612
Permanent Visas	571	642	674	644	608	552	551	507	553	526	622	621
Temporary Visas	1,118	1,311	1,463	1,472	1,564	1,829	2,006	2,295	2,526	2,643	2,926	3,510
TOTAL	2,028	2,343	2,565	2,574	2,637	2,833	3,049	3,314	3,595	3,698	4,088	4,743

CHART 2-2

CITIZENSHIP OF ASIAN PhD RECIPIENTS 1977 - 1988



Source: NRC

Graph by CPST

SOURCE: Summary Reports: Doctorate Recipients from United States Universities, 1975 - 1988, National Research Council

TABLE 2-7

PHD AWARDS TO U.S. CITIZENS BY RACIAL ETHNIC GROUP AND SEX, 1975-88
NATURAL SCIENCE AND ENGINEERING

					Am. Ind.		Asian		Black		Hispanic		%	White	
Year	Total	Men	Women	%W	Men	Women	Men	Women	Men	Women	Men	Women	Min	Men	Women
1975	8918	7793	1125	13	5	1	139	26	84	24	74	7	4.0	7491	1067
1976	8610	7469	1141	13	3	0	167	39	74	37	63	4	4.5	7162	1061
1977	8292	7126	1166	14	15	1	160	26	79	38	81	14	5.0	6791	1082
1978	7901	6660	1241	16	14	1	194	40	98	35	74	16	6.0	6280	1149
1979	8174	6766	1408	17	10	0	201	50	89	38	69	25	5.9	6397	1295
75-79	41895	35814	6081	15	47	3	861	181	424	172	361	66	5.0	34121	5654
1980	8188	6623	1565	19	12	3	201	49	64	37	63	18	5.5	6283	1452
1981	8342	6676	1666	20	15	4	204	56	73	47	77	19	5.9	6307	1540
1982	8626	6744	1882	22	15	5	189	76	65	43	88	31	5.9	6387	1727
1983	8474	6490	1984	23	15	2	207	84	69	40	61	42	6.1	6138	1816
1984	8660	6600	2060	24	19	3	238	96	77	45	95	34	7.0	6171	1882
80-84	42290	33133	9157	22	76	17	1039	361	348	212	384	144	6.1	31286	8417
1985	8508	6404	2104	25	14	9	229	89	78	41	91	42	7.0	5992	1923
1986	8724	6459	2265	26	20	17	250	89	56	47	102	48	7.2	5862	2034
1987	8632	6366	2266	26	24	9	292	92	68	51	113	52	8.1	5869	2062
1988	9189	6708	2481	27	22	11	301	78	66	56	145	51	7.9	6174	2285
Total	119238	94884	24354	20	203	66	2972	890	1040	579	1196	403	6.2	89304	22375
Includes Physical, Mathematical, Computer and Life Sciences and Engineering															
TOTAL SCIENCE AND ENGINEERING															
1975	13853	11402	2451	18	11	3	165	36	190	71	121	16	4.4	10915	2325
1976	13749	11146	2603	19	10	0	203	51	178	94	110	12	4.8	10645	2446
1977	13252	10583	2669	20	21	8	198	43	202	103	132	30	5.6	10030	2480
1978	12715	9915	2800	22	19	2	225	61	195	109	136	44	6.2	9340	2584
1979	12958	9849	3109	24	22	5	242	73	184	131	132	48	6.5	9269	2852
75-79	66527	52895	13632	20	83	18	1033	264	949	508	631	150	5.5	50199	12687
1980	12955	9612	3343	26	20	8	244	85	147	134	128	46	6.3	9073	3064
1981	13325	9736	3589	27	22	9	249	87	161	137	141	58	6.5	9163	3298
1982	13314	9549	3765	28	28	12	225	107	167	134	166	68	6.8	8963	3444
1983	13365	9296	4069	30	24	5	243	112	152	142	141	98	6.9	8736	3712
1984	13322	9148	4174	31	27	5	279	122	163	153	174	83	7.6	8505	3811
80-84	66281	47341	18940	29	121	39	1240	513	790	700	750	353	6.8	44440	17329
1985	12940	8819	4121	32	22	18	263	117	157	136	153	101	7.5	8224	3749
1986	13272	8873	4399	33	32	25	290	118	126	140	177	103	7.6	8026	3950
1987	12902	8584	4318	33	32	23	331	128	122	133	179	132	8.4	7920	3902
1988	13441	8839	4602	34	29	16	342	122	143	137	203	126	8.3	8122	4201
Total	185363	135351	50012	27	319	139	3499	1262	2287	1754	2093	965	6.6	126931	45818

Total those race and citizenship are known.
NS&E = Natural Science and Engineering   S&E also includes Social/Behavioral Sciences

SOURCE: Summary Reports: Doctorate Recipients from United States Universities, 1975 - 1988, National Research Council

TABLE 2-7 (continued)

PHD AWARDS TO U.S. CITIZENS BY RACIAL ETHNIC GROUP AND SEX, 1975-88

					Am. Ind.		Asian		Black		Hispanic		%	White	
Year	Total*	Men	Women	IW	Men	Women	Men	Women	Men	Women	Men	Women	Min	Men	Women
							TOTAL ALL FIELDS								
1975	25976	19777	6199	24	27	9	222	64	650	349	242	61	6.3	18636	5716
1976	26182	19551	6631	25	31	9	244	90	652	443	253	87	6.9	18371	6002
1977	25008	18299	6709	27	43	22	251	88	684	432	310	113	7.8	17011	6054
1978	23767	16811	6956	29	50	10	287	103	584	449	317	156	8.2	15573	6238
1979	23947	16487	7460	31	56	25	311	117	551	505	308	154	8.5	15261	6659
75-79	124880	90925	33955	27	207	75	1315	462	3121	2178	1430	571	7.5	84852	30669
1980	23970	15962	8008	33	46	29	313	145	499	533	256	156	8.2	14848	7145
1981	24006	15603	8403	35	56	29	315	150	499	514	275	189	8.4	14458	7521
1982	23785	15137	8648	36	44	33	281	171	483	564	344	191	8.9	13985	7689
1983	23704	14661	9043	38	50	30	312	180	412	509	288	250	8.6	13599	8074
1984	23394	14285	9109	39	53	20	338	174	427	526	313	222	8.9	13154	8167
80-84	118859	75648	43211	36	249	141	1559	820	2320	2646	1476	1008	8.6	70044	38596
1985	22717	13793	8924	39	39	54	328	187	374	531	298	261	9.1	12750	7891
1986	22984	13583	9401	41	58	41	347	180	321	499	299	268	8.8	12257	8281
1987	22396	13194	9202	41	62	53	367	173	317	448	332	286	9.1	12116	8242
1988	22789	13392	9397	41	51	42	413	199	311	494	321	273	9.2	12296	8389
Total	334625	220535	114090	34	666	406	4329	2021	6764	6796	4156	2667	8.3	204315	102068
							PHYSICAL SCIENCES								
1975	3476	3199	277	8	3	0	46	4	36	5	25	2	3.5	3089	266
1976	3265	2969	296	9	0	0	56	14	22	6	22	1	3.7	2869	275
1977	3149	2851	298	9	7	0	53	3	39	3	41	5	4.8	2711	282
1978	2943	2630	313	11	4	1	67	14	44	7	24	2	5.5	2491	289
1979	3042	2684	358	12	4	0	63	14	44	4	27	10	5.5	2546	330
75-79	15875	14333	1542	10	18	1	285	49	185	25	139	20	4.5	13706	1442
1980	2847	2487	360	13	4	1	64	11	18	7	22	5	4.6	2379	336
1981	2893	2536	357	12	2	0	61	13	26	5	31	5	4.9	2416	334
1982	3028	2593	435	14	5	0	55	26	23	7	25	9	5.0	2485	393
1983	3022	2563	459	15	9	0	69	24	21	5	22	15	5.5	2442	415
1984	3025	2539	486	16	7	0	82	24	30	5	44	9	6.6	2376	448
80-84	14815	12718	2097	14	27	1	331	98	118	29	144	43	5.3	12098	1926
1985	2947	2454	493	17	4	0	74	26	25	5	32	10	6.0	2319	452
1986	3003	2486	517	17	4	4	84	23	18	7	41	12	6.4	2253	461
1987	2995	2443	552	18	7	3	80	24	22	7	47	17	6.9	2287	501
1988	3136	2568	568	18	9	2	89	22	25	7	52	17	7.1	2393	520
Total	42771	37002	5769	13	69	11	943	242	393	80	455	119	5.4	35056	5302

SOURCE: Summary Reports: Doctorate Recipients from United States Universities, 1975 - 1988, National Research Council

TABLE 2-7 (continued)

PHD AWARDS TO U.S. CITIZENS BY RACIAL ETHNIC GROUP AND SEX, 1975-88

					Am. Ind.		Asian		Black		Hispanic		%	White	
Year	Total*	Men	Women	%W	Men	Women	Men	Women	Men	Women	Men	Women	Min	Men	Women
							ENGINEERING								
1975	1641	1609	32	2	1	0	60	1	11	0	15	0	5.4	1522	31
1976	1506	1473	33	2	0	0	57	2	12	0	15	0	5.7	1389	31
1977	1401	1361	40	3	1	0	66	1	10	1	18	0	6.9	1266	38
1978	1167	1140	27	2	2	0	63	0	9	0	19	0	8.0	1047	27
1979	1189	1154	35	3	3	0	69	0	16	1	14	1	8.7	1052	33
75-79	6904	6737	167	2	7	0	315	4	58	2	81	1	6.8	6276	160
1980	1173	1115	58	5	3	0	71	2	9	2	17	1	9.0	1015	53
1981	1118	1069	49	4	4	0	71	6	16	0	12	0	9.7	966	43
1982	1122	1049	73	7	3	0	69	3	9	0	22	1	9.5	946	69
1983	1119	1039	80	7	0	0	63	3	18	1	15	3	9.2	943	73
1984	1193	1107	86	7	3	0	79	16	11	1	18	4	11.1	996	65
80-84	5725	5379	346	6	13	0	353	30	63	4	84	9	9.7	4866	303
1975	1223	1109	114	9	1	0	76	14	16	3	16	0	10.3	1000	97
1986	1379	1240	139	10	5	1	74	6	10	4	22	3	9.1	1102	122
1987	1505	1358	147	10	7	0	124	11	11	1	21	3	11.8	1195	132
1988	1734	1560	174	10	4	0	132	9	15	4	37	6	11.9	1372	155
Total	18470	17383	1087	6	37	1	1074	74	173	18	261	22	9.0	15811	969
							LIFE SCIENCES								
1975	3801	2985	816	21	1	1	33	21	37	19	34	5	4.0	2880	770
1976	3839	3027	812	21	3	0	54	23	40	31	26	3	4.7	2904	755
1877	3742	2914	828	22	7	1	41	22	30	34	22	9	4.4	2814	762
1978	3791	2890	901	24	8	0	64	26	45	28	31	14	5.7	2742	833
1979	3943	2928	1015	26	3	0	69	36	29	33	28	14	5.4	2799	932
75-79	19116	14744	4372	23	22	2	261	128	181	145	141	45	4.8	14139	4052
1980	4168	3021	1147	28	5	2	66	36	37	28	24	12	5.0	2889	1063
1981	4331	3071	1260	29	9	4	72	37	31	42	34	14	5.6	2925	1163
1982	4476	3102	1374	31	7	5	65	47	33	36	41	21	5.7	2956	1265
1983	4333	2888	1445	33	6	2	75	57	30	34	24	24	5.8	2753	1328
1984	4442	2954	1488	33	9	3	77	56	36	39	33	21	6.2	2799	1369
80-84	21750	15036	6714	31	36	16	355	233	167	179	156	92	5.7	14322	6188
1985	4338	2841	1497	35	9	9	79	49	37	33	43	32	6.7	2673	1374
1996	4342	2733	1609	37	11	12	92	69	28	36	39	33	7.2	2507	1451
1987	4132	2565	1567	38	10	6	88	57	35	43	45	32	7.6	2387	1429
1988	4319	2580	1739	40	9	9	80	47	26	45	56	28	6.9	2409	1610
Total	57997	40499	17498	30	97	54	955	574	474	481	480	262	5.8	38437	16104

SOURCE: Summary Reports: Doctorate Recipients from United States Universities, 1975 - 1988, National Research Council

TABLE 2-7 (continued)

PHD AWARDS TO U.S. CITIZENS BY RACIAL ETHNIC GROUP AND SEX, 1975-88

					Am. Ind.		Asian		Black		Hispanic		%	White	
Year	Total*	Men	Women	%W	Men	Women	Men	Women	Men	Women	Men	Women	Min	Men	Women
							SOCIAL SCIENCES								
1975	4935	3609	1326	27	6	2	26	10	106	47	47	9	5.1	3424	1258
1976	5139	3677	1462	28	7	0	36	12	104	57	47	8	5.3	3483	1385
1977	4960	3457	1503	30	6	7	38	17	123	65	51	16	6.5	3239	1398
1978	4814	3255	1559	32	5	1	31	21	97	74	62	28	6.6	3060	1435
1979	4784	3083	1701	36	12	5	41	23	95	93	63	23	7.4	2872	1557
75-79	24632	17081	7551	31	36	15	172	83	525	336	270	84	6.2	16078	7033
1980	4767	2989	1778	37	8	5	43	36	83	97	65	28	7.7	2790	1612
1981	4983	3060	1923	39	7	5	45	31	88	90	64	39	7.4	2856	1758
1982	4688	2805	1883	40	13	7	36	31	102	91	78	37	8.4	2576	1717
1983	4891	2806	2085	43	9	3	36	28	83	102	80	56	8.1	2598	1896
1984	4662	2548	2114	45	8	2	41	26	86	108	79	49	8.6	2334	1929
80-84	23991	14208	9783	41	45	22	201	152	442	488	366	209	8.0	13154	8912
1985	4432	2415	2017	46	8	9	34	28	79	95	62	59	8.4	2232	1926
1986	4548	2414	2134	47	12	8	40	29	70	93	75	55	8.4	2164	1916
1987	4270	2218	2052	48	8	14	39	36	[illegible]	82	66	80	8.9	2051	1840
1988	4252	2131	2121	50	7	5	41	44	77	81	58	75	9.1	1948	1916
Total	66125	40467	25658	39	116	73	527	372	1247	1175	897	562	7.5	37627	23443
							HUMANITIES								
1975	4249	2799	1450	34	3	2	17	13	60	27	40	24	4.4	2679	1384
1976	4126	2698	1428	35	2	1	15	18	53	35	47	24	4.7	2581	1347
1977	3845	2438	1407	37	3	2	25	13	65	30	65	38	6.3	2280	1324
1978	3558	2193	1365	38	7	1	17	12	48	32	55	54	6.4	2066	1266
1979	3436	2111	1325	39	7	3	29	16	63	56	60	47	8.2	1952	1203
75-79	19214	12239	6975	36	7	9	103	72	289	180	267	187	5.8	11558	6524
1980	3238	1931	1307	40	1	2	23	17	56	41	39	40	6.8	1812	1207
1981	3090	1798	1292	42	8	4	19	14	43	41	49	43	7.2	1679	1190
1982	2938	1650	1288	44	2	4	14	14	46	50	55	52	8.1	1533	1168
1983	2902	1604	1298	45	4	2	16	19	36	37	46	50	7.2	1502	1190
1984	2877	1554	1323	46	3	2	13	15	45	49	57	42	7.9	1436	1215
80-84	15045	8537	6508	43	18	14	85	79	226	218	246	227	7.4	7962	5970
1985	2780	1556	1224	44	2	6	26	17	31	36	51	45	7.7	1446	1120
1986	2728	1477	1251	46	6	1	10	20	28	42	38	38	6.7	1366	1130
1987	2675	1437	1238	46	7	4	8	17	31	42	56	40	7.7	1335	1135
1988	2743	1500	1243	45	1	6	17	20	38	39	40	54	7.8	1404	1124
Total	45185	26746	18439	41	41	40	249	225	643	557	698	591	6.7	25071	17003

SOURCE: Summary Reports: Doctorate Recipients from United States Universities, 1975 - 1988, National Research Council

TABLE 2-7 (continued)

PHD AWARDS TO U.S. CITIZENS BY RACIAL ETHNIC GROUP AND SEX, 1975-88

					Am. Ind.		Asian		Black		Hispanic		%	White	
Year	Total*	Men	Women	%W	Men	Women	Men	Women	Men	Women	Men	Women	Min	Men	Women
PROFESSIONAL AND OTHER FIELDS															
1975	1271	1059	212	17	0	1	13	3	24	18	9	1	5.4	1013	189
1976	1382	1082	300	22	4	2	8	2	35	23	19	7	7.2	1016	266
1977	1312	1019	293	22	2	0	12	2	25	24	20	3	6.7	960	264
1978	1319	1032	287	22	2	0	13	5	42	21	20	8	8.4	955	253
1979	1309	958	351	27	2	1	7	7	40	24	11	2	7.3	897	317
75-79	6593	5150	1443	22	11	4	53	19	166	110	79	21	7.0	4841	1289
1980	1281	902	379	30	0	1	18	6	36	27	12	3	8.0	836	342
1981	1231	831	400	32	2	1	10	7	28	39	9	11	8.7	782	342
1982	1362	891	471	35	1	1	18	5	36	37	13	5	8.5	823	423
1983	1302	870	432	33	1	0	19	9	25	37	11	11	8.7	814	375
1984	1394	876	518	37	4	0	19	4	28	29	21	13	8.5	804	472
80-84	6570	4370	2200	33	8	3	84	31	153	169	66	43	8.5	4059	1954
1985	1329	833	496	37	3	3	15	8	33	41	12	17	9.9	770	427
1986	1369	830	559	40	4	5	22	9	26	37	16	7	9.1	751	495
1987	1431	854	577	40	5	3	10	5	28	30	15	10	7.4	796	529
1988	1391	855	536	39	4	2	20	9	27	51	13	6	9.5	791	468
Total	18703	12892	5811	31	35	20	204	81	433	438	201	104	8.1	12008	5162
EDUCATION															
1975	6603	4517	2086	32	13	3	27	12	376	233	72	20	11.4	4029	1818
1976	6925	4625	2300	33	15	6	18	19	386	288	77	44	12.3	4129	1943
1977	6599	4259	2340	35	17	12	16	25	392	275	93	42	13.2	3741	1986
1978	6175	3671	2504	41	22	7	32	25	299	287	106	50	13.4	3212	2135
1979	6244	3569	2675	43	24	16	33	21	264	294	105	57	13.0	3143	2287
75-79	32546	20641	11905	37	91	44	126	102	1717	1377	453	213	12.7	18254	10169
1980	6496	3517	2979	46	25	18	28	37	260	331	77	67	13.0	3127	2526
1981	6360	3238	3122	49	24	15	37	42	267	297	76	77	13.1	2834	2691
1982	6171	3047	3124	51	13	16	24	45	234	343	110	66	13.8	2666	2654
1983	6135	2891	3244	53	21	23	34	40	199	293	90	91	12.9	2547	2797
1984	5801	2707	3094	53	19	13	27	33	191	295	61	84	12.5	2409	2669
80-84	30963	15400	15563	50	102	85	150	197	1151	1559	414	385	13.1	13583	13337
1985	5668	2585	3083	54	12	27	24	45	157	318	82	98	13.5	2310	2595
1986	5595	2403	3192	57	16	10	25	33	141	280	68	120	12.4	2114	2706
1987	5388	2319	3069	57	18	23	18	23	136	243	82	104	12.0	2065	2676
1988	5214	2198	3016	58	17	18	34	48	103	267	65	87	12.3	1979	2596
Total	85374	45546	39828	47	256	207	377	448	3405	4044	1164	1007	12.8	40305	34079

* Total those race and citizenship are known.

SOURCE: Summary Reports: Doctorate Recipients from United States Universities, 1975 - 1988, National Research Council

TABLE 2-8

NUMBER AND PERCENT OF PHDS AWARDED TO U.S. MINORITIES AND FOREIGN CITIZENS IN ALL FIELDS AND IN SCIENCE AND ENGINEERING

		U.S. Citizens										Foreign Citizens			
Year	Total Degrees	Black No.	%	Hispanic No.	%	Am. Indian No.	%	Asian No.	%	All Minor. No.	%	Temp. Visa No.	%	Perm. Visa No.	%
ALL FIELDS															
1975	32,913	999	3.0	303	0.9	36	0.1	286	0.9	1,624	4.9	3,531	10.7	1,709	5.2
1976	32,923	1,095	3.3	340	1.0	40	0.1	334	1.0	1,809	5.5	3,518	10.7	1,491	4.5
1977	31,672	1,116	3.5	423	1.3	65	0.2	339	1.1	1,943	6.1	3,447	10.9	1,364	4.3
1978	30,850	1,033	3.3	473	1.5	60	0.2	390	1.3	1,956	6.3	3,416	11.1	1,343	4.4
1979	31,200	1,056	3.4	462	1.5	81	0.3	428	1.4	2,027	6.5	3,574	11.5	1,314	4.2
1980	30,982	1,032	3.3	421	1.4	75	0.2	458	1.5	1,986	6.4	3,632	11.7	1,286	4.2
1981	31,319	1,013	3.2	464	1.5	85	0.3	465	1.5	2,027	6.5	3,924	12.5	1,272	4.1
1982	31,048	1,047	3.4	535	1.7	77	0.2	452	1.5	2,111	6.8	4,189	13.5	1,224	3.9
1983	31,190	921	3.0	538	1.7	80	0.3	492	1.6	2,031	6.5	4,495	14.4	1,272	4.1
1984	31,253	953	3.0	535	1.7	73	0.2	512	1.6	2,073	6.6	4,817	15.4	1,216	3.9
1985	31,202	909	2.9	559	1.8	93	0.3	515	1.7	2,076	6.7	5,214	16.7	1,320	4.2
1986	31,770	946	3.0	674	2.1	99	0.3	1,050	3.3	2,769	8.7	5,267	16.6	1,430	4.5
1987	32,276	904	2.8	709	2.2	115	0.4	1,162	3.6	2,890	9.0	5,593	17.3	1,582	4.9
1988	33,456	805	2.4	595	1.8	93	0.3	612	1.8	2,105	6.3	6,176	18.5	1,611	4.8
TOTAL	444,056	13,029	3.1	7,031	1.6	1,072	0.2	7,495	1.7	29,427	6.6	60,793	13.7	19,434	4.4
SCIENCE* AND ENGINEERING															
1975	19,048	261	1.4	137	0.7	14	0.1	201	1.1	613	3.2	2,797	14.7	1,290	6.8
1976	18,790	272	1.4	122	0.6	10	0.1	254	1.4	658	3.5	2,772	14.8	1,133	6.0
1977	18,201	305	1.7	162	0.9	29	0.2	241	1.3	737	4.0	2,678	14.6	1,028	5.6
1978	17,956	304	1.7	180	1.0	21	0.1	286	1.6	791	4.4	2,606	14.5	1,013	5.6
1979	18,247	315	1.7	180	1.0	27	0.1	315	1.7	837	4.6	2,713	14.9	982	5.4
1980	18,171	281	1.5	174	1.0	28	0.2	329	1.8	812	4.5	2,775	15.3	977	5.4
1981	18,662	298	1.6	199	1.1	31	0.2	336	1.8	864	4.6	2,990	16.0	927	5.0
1982	19,748	301	1.6	234	1.2	40	0.2	332	1.8	907	4.8	3,196	17.0	879	4.7
1983	18,799	294	1.6	239	1.3	29	0.2	355	1.9	917	4.9	3,443	18.3	921	4.9
1984	19,008	316	1.7	257	1.4	32	0.2	401	2.1	1,006	5.3	3,714	19.5	856	4.5
1985	19,164	293	1.5	254	1.3	40	0.2	380	2.0	967	5.0	4,076	21.3	945	4.9
1986	19,745	333	1.7	346	1.8	57	0.3	827	4.2	1,563	7.9	4,159	21.1	1,007	5.1
1987	20,203	335	1.7	347	1.7	55	0.3	946	4.7	1,683	8.3	4,462	22.1	1,111	5.5
1988	21,411	280	1.3	330	1.5	45	0.2	464	2.2	1,119	5.2	4,969	23.2	1,143	5.3
TOTAL	266,233	4,188	1.6	3,161	1.2	458	0.2	5,667	2.1	13,474	5.1	47,350	17.8	14,212	5.3

* Includes Social and Behavioral Sciences

SOURCE: Summary Report 1987 Doctorate Recipients from U.S. Universities, National Research Council

TABLE 2-9

PERCENTAGE OF NON-U.S. PHD RECIPIENTS WITH FIRM POSTGRADUATE COMMITMENTS, 1987

	Permanent Visas				Temporary Visas			
	U.S. Loc.		Foreign Loc.		U.S. Loc.		Foreign Loc.	
Field	Empl.	Study	Empl.	Study	Empl.	Study	Empl.	Study
Total All Fields	52.7	24.2	11.2	2.6	22.7	25.2	36.4	6.1
Physical Sciences	40.1	42.0	6.4	5.7	19.6	45.0	18.0	8.2
Engineering	68.7	13.7	5.5	0.0	32.5	20.9	32.2	3.2
Life Sciences	17.8	57.9	9.9	3.9	5.1	37.8	42.5	6.8
Social Sciences	58.5	11.4	15.4	3.3	28.8	9.7	46.8	7.9
Humanities	72.9	7.3	8.3	1.0	33.8	3.0	47.8	6.0
Education	51.5	0.0	35.3	2.9	7.1	1.2	67.5	7.1
Professional/Other	75.6	9.0	12.8	0.0	42.1	2.5	45.3	2.9

* Details do not add to 100 percent where location is unknown.

TABLE 2-10

EMPLOYMENT SECTOR COMMITMENTS OF PHD RECIPIENTS BY SEX, RACE/ETHNICITY AND BROAD FIELD, 1977 AND 1987

	Employment Sector							
	Academe*		Industry		Government		Other&Unkn	
	1977	1987	1977	1987	1977	1987	1977	1987
Total Ph.D.s	58.6	50.5	12.7	19.3	13.3	10.8	15.8	20.4
Men	55.3	47.5	15.1	23.4	14.8	12.5	15.2	17.2
Women	68.8	54.9	5.5	13.3	8.7	8.4	17.4	25.1
American Indians	51.2	46.9	9.8	18.8	19.5	12.5	19.5	23.4
Asians	39.8	40.6	46.6	43.0	9.0	11.3	4.9	7.3
Blacks	67.3	51.6	4.8	8.9	9.6	14.0	19.4	28.4
Hispanics	71.4	54.0	5.2	12.9	13.6	12.9	10.1	21.9
Whites	58.5	50.8	12.4	19.0	13.6	10.6	15.9	20.6
Physical Sciences	42.2	35.7	38.2	49.5	17.3	11.8	2.5	3.5
Engineering	26.2	30.1	49.6	53.1	21.4	15.3	3.1	1.6
Life Sciences	60.2	52.3	16.6	23.8	17.1	16.6	6.1	7.9
Social Sciences	61.3	44.9	7.3	19.0	17.6	14.5	14.1	22.8
Humanities	84.8	80.9	3.3	5.6	3.2	3.2	9.2	11.4
Education	53.8	44.3	3.1	6.4	12.0	9.8	31.8	41.2
Professional/Other	75.8	73.4	7.2	10.7	7.2	5.6	10.1	10.6

*Academe includes two- and four-year colleges and universities, medical schools, and foreign universities. Elementary and secondary schools are included in "Other and Unknown."

SOURCE: Summary Reports: Doctorate Recipients from United States Universities, 1974 - 1988, National Research Council

TABLE 2-11

SOURCES OF SUPPORT DURING GRADUATE SCHOOL FOR DOCTORATE RECIPIENTS, BY SEX, SELECTED YEARS, 1974 - 1978

	1974				1978				1985				1987				1988			
SOURCE OF SUPPORT	MEN	%	WOMEN	%	MEN	%	WOMEN	%	MEN	%	WOMEN	%	MEN	%	WOMEN	%	MEN	%	WOMEN	%
FEDERAL SUPPORT																				
NSF Research Asst													1,183	6.3	238	2.3	1,478	7.5	335	3.1
NIH Research Asst													517	2.7	287	2.7	778	4.0	397	3.7
Other Fed Res Asst													752	4.0	208	2.0	921	4.7	276	2.6
NSF Fellowship	1,305	5.3	206	3.5	586	2.7	139	1.8	393	2.1	161	1.6	312	1.7	144	1.4	261	1.3	120	1.1
NIH Traineeship	1,233	5.0	441	7.5	1,068	5.0	473	6.1	919	4.8	651	6.5	722	3.8	630	6.0	690	3.5	664	6.2
GI Bill	3,263	13.2	22	0.4	2,657	12.5	50	0.6	924	4.8	66	0.7	638	3.4	65	0.6	519	2.7	56	0.5
Other Fed Support*	7,648	30.9	1,892	32.1	5,041	23.6	1,998	25.6	1,201	6.3	895	8.9	968	5.1	738	7.0	1,130	5.8	740	6.9
FOREIGN GOVERNMENT												0.0	885	4.7	167	1.6	1,263	6.5	243	2.3
NATIONAL FELLOWSHIPS+									638	3.3	507	5.0	800	4.2	522	5.0	790	4.0	590	5.5
INSTITUTIONAL FUNDS																				
Univ Teaching Asst	12,326	49.8	2,786	47.3	9,833	46.1	3,360	43.1	9,330	48.7	4,463	44.2	9,550	50.6	4,765	45.5	10,185	52.0	4,970	46.2
Univ Research Asst	9,079	36.7	1,421	24.1	8,249	38.7	1,957	25.1	9,014	47.1	3,193	31.6	7,903	41.9	3,137	30.0	8,429	43.1	3,249	30.2
Univ Fellowship	4,680	18.9	1,360	23.1	3,844	18.0	1,422	18.2	3,956	20.7	2,154	21.3	3,702	19.6	2,070	19.8	3,765	19.2	2,187	20.3
Other Univ Related	2,163	8.7	701	11.9	1,453	6.8	678	8.7	1,087	5.7	911	9.0	1,508	8.0	1,210	11.6	1,419	7.2	1,311	12.2
Business/Industry	979	4.0	108	1.8	632	3.0	142	1.8	1,031	5.4	488	4.8	996	5.3	558	5.3	1,052	5.4	575	5.3
PERSONAL FUNDS																				
Own Earnings	9678	39.1	2529	42.9	10,310	48.4	4,489	57.6	11,695	61.1	7,271	72.1	9,892	52.4	6,811	65.1	10,044	51.3	6,880	63.9
Spouse's Earnings	4,948	20.0	1,232	20.9	6,411	30.1	2,590	33.2	5,570	29.1	3,592	35.6	4,401	23.3	3,211	30.7	4,276	21.8	3,143	29.2
Family Support	1,632	6.6	495	8.4	2,876	13.5	1,215	15.6	4,734	24.7	2,336	23.2	4,356	23.1	2,351	22.6	4,589	23.4	2,438	22.6
Student Loans#	3,308	13.4	703	11.9	1,995	9.4	799	10.2	6,058	31.6	3,825	37.9	5,839	30.9	4,109	39.2	4,989	25.5	3,550	33.0
Other Sources	1,282	5.2	331	5.6	1,550	7.3	537	6.9	1,367	7.1	488	4.8	662	3.5	381	3.6	582	3.0	400	3.7
UNDUPLICATED TOTAL@	24,761		5,894		21,323		7,799		19,147		10,090		18,871		10,469		19,578		10,769	

* Includes AEC/ERDA, NIH, USDA and NDEA Fellowships; NASA, NSF and NIH Traineeships; Nat Direct Std Loans; USDA Res Asst; Other HEW/HHS; Other Ed Dept; and Grad/Prof. Opp Program which were formerly shown separately.

+ Includes Woodrow Wilson Fellowships which were formerly shown separately.

# Includes Guaranteed Student Loans and Other Loans.

@ PhDs who did not report sources of support are omitted from this table.

SOURCE: Series of Earned Degrees Conferred, 1986-87, National Center for Education Statistics

CHART 2-3

PERCENT WOMEN GRADUATES 1987

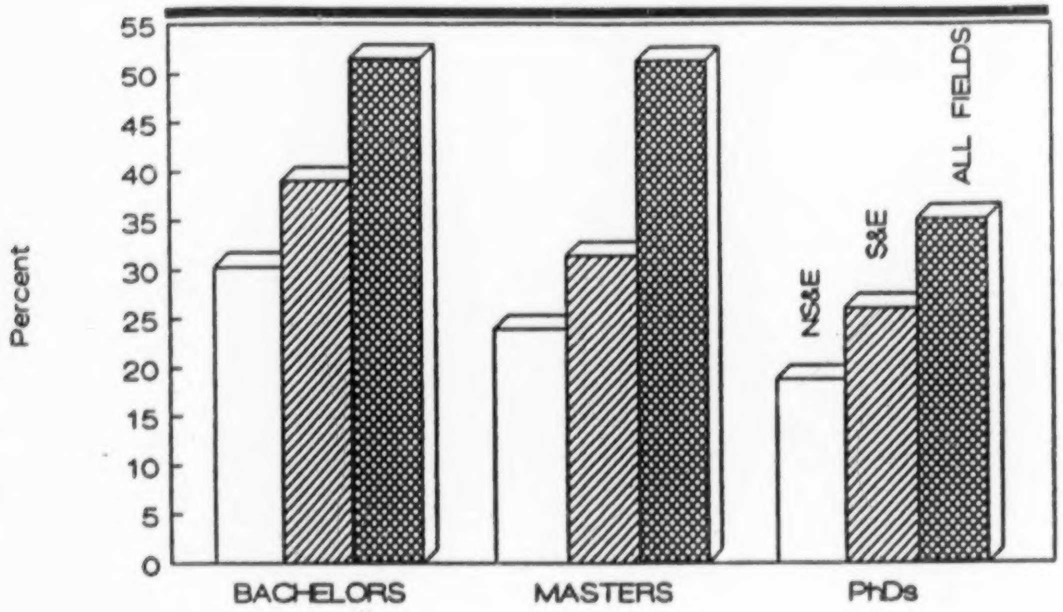
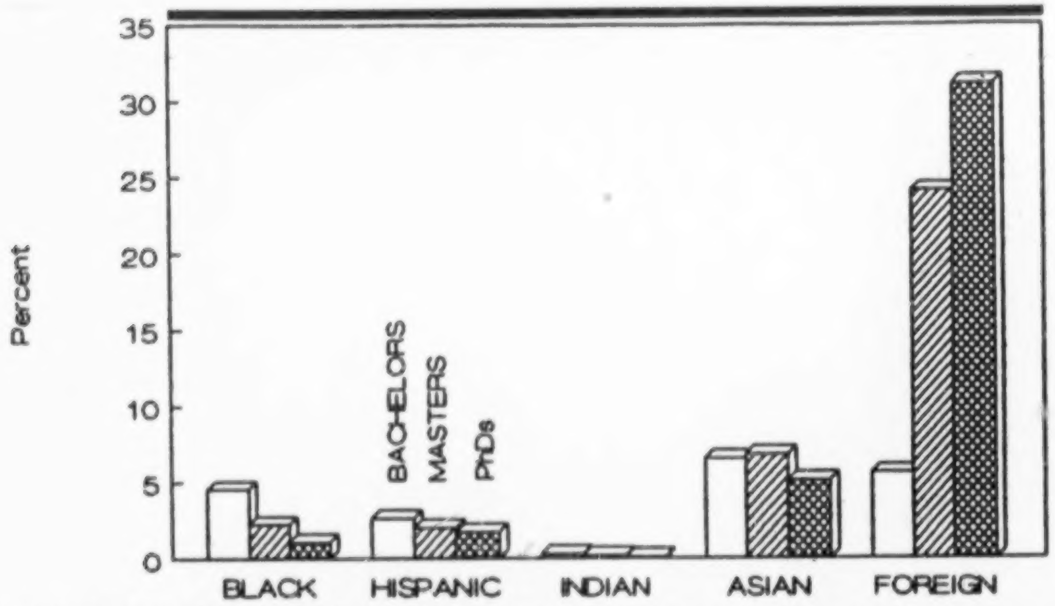


CHART 2-4

PERCENT MINORITIES EARNING NS&E DEGREES, 1987



NS&E = Natural Science and Engineering   S&E also includes Social/Behavioral Sciences

---

SOURCE: Digest of Education Statistics 1988, National Center for Education Statistics

TABLE 2-13

EARNED DEGREES CONFERRED IN THE U.S. BY LEVEL AND SEX, 1869-70 - 1989-90

Year	Associate degrees			Bachelor's degrees			Master's degrees			First-professional degrees			Doctor's degrees		
	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1869-70	—	—	—	[1]9,371	[1]7,993	[1]1,378	0	0	0	(2)	(2)	(2)	1	1	0
1879-80	—	—	—	[1]12,896	[1]10,411	[1]2,485	879	868	11	(2)	(2)	(2)	54	51	3
1889-90	—	—	—	[1]15,539	[1]12,857	[1]2,682	1,015	821	194	(2)	(2)	(2)	149	147	2
1899-1900	—	—	—	[1]27,410	[1]22,173	[1]5,237	1,583	1,280	303	(2)	(2)	(2)	382	359	23
1909-10	—	—	—	[1]37,199	[1]28,762	[1]8,437	2,113	1,555	558	(2)	(2)	(2)	443	399	44
1919-20	—	—	—	[1]48,622	[1]31,980	[1]16,642	4,279	2,985	1,294	(2)	(2)	(2)	615	522	93
1929-30	—	—	—	[1]122,484	[1]73,615	[1]48,869	14,969	8,925	6,044	(2)	(2)	(2)	2,299	1,946	353
1939-40	—	—	—	[1]186,500	[1]109,546	[1]76,954	26,731	16,508	10,223	(2)	(2)	(2)	3,290	2,861	429
1949-50	—	—	—	[1]432,058	[1]328,841	[1]103,217	58,183	41,220	16,963	(2)	(2)	(2)	6,420	5,804	616
1959-60	—	—	—	[1]392,440	[1]254,063	[1]138,377	74,435	50,898	23,537	(2)	(2)	(2)	9,829	8,801	1,028
1960-61	—	—	—	369,995	228,500	141,495	81,690	55,267	26,423	25,253	24,577	676	10,575	9,463	1,112
1961-62	—	—	—	388,680	234,671	154,009	88,414	59,710	28,704	25,607	24,836	771	11,622	10,377	1,245
1962-63	—	—	—	416,928	246,129	170,799	95,470	64,198	31,272	26,590	25,753	837	12,822	11,448	1,374
1963-64	—	—	—	466,944	270,319	196,625	105,551	70,339	35,212	27,209	26,357	852	14,490	12,955	1,535
1964-65	—	—	—	501,713	289,003	212,710	117,152	77,544	39,608	28,290	27,283	1,007	16,467	14,692	1,775
1965-66	111,607	63,779	47,828	520,923	299,871	221,052	140,548	93,063	47,485	30,124	28,982	1,142	18,237	16,121	2,116
1966-67	139,183	78,356	60,827	558,852	322,948	235,904	157,707	103,092	54,615	31,695	30,401	1,294	20,617	18,163	2,454
1967-68	159,441	90,317	69,124	632,758	358,105	274,653	176,749	113,519	63,230	33,939	32,402	1,537	23,089	20,183	2,906
1968-69	183,279	105,661	77,618	729,071	410,785	318,286	193,756	121,531	72,225	35,114	33,595	1,519	26,188	22,752	3,436
1969-70	206,023	117,432	88,591	792,656	451,380	341,276	208,291	125,624	82,667	34,578	32,794	1,784	29,866	25,890	3,976
1970-71	252,610	144,395	108,215	839,730	475,594	364,136	230,509	138,146	92,363	37,946	35,544	2,402	32,107	27,530	4,577
1971-72	292,119	166,317	125,802	887,273	500,590	386,683	251,633	149,550	102,083	43,411	40,723	2,688	33,363	28,090	5,273
1972-73	316,174	175,413	140,761	922,362	518,191	404,171	263,371	154,468	108,903	50,018	46,489	3,529	34,777	28,571	6,206
1973-74	343,924	188,591	155,333	945,776	527,313	418,463	277,033	157,842	119,191	53,816	48,530	5,286	33,816	27,365	6,451
1974-75	360,171	191,017	169,154	922,933	504,841	418,092	292,450	161,570	130,880	55,916	48,956	6,960	34,083	26,817	7,266
1975-76	391,454	209,996	181,458	925,746	504,925	420,821	311,771	167,248	144,523	62,649	52,892	9,757	34,064	26,267	7,797
1976-77	406,377	210,842	195,535	919,549	495,545	424,004	317,164	167,783	149,381	64,359	52,374	11,985	33,232	25,142	8,090
1977-78	412,246	204,718	207,528	921,204	487,347	433,857	311,620	161,212	150,408	66,581	52,270	14,311	32,131	23,658	8,473
1978-79	402,702	192,091	210,611	921,390	477,344	444,046	301,079	153,370	147,709	68,848	52,652	16,196	32,730	23,541	9,189
1979-80	400,910	183,737	217,173	929,417	473,611	455,806	298,081	150,749	147,332	70,131	52,716	17,415	32,615	22,943	9,672
1980-81	416,377	188,638	227,739	935,140	469,883	465,257	295,739	147,043	148,696	71,956	52,792	19,164	32,958	22,711	10,247
1981-82	434,515	196,939	237,576	952,998	473,364	479,634	295,546	145,532	150,014	72,032	52,223	19,809	32,707	22,224	10,483
1982-83	456,441	207,141	249,300	969,510	479,140	490,370	289,921	144,697	145,224	73,136	51,310	21,826	32,775	21,902	10,873
1983-84	452,416	202,762	249,654	974,309	482,319	491,990	284,263	143,595	140,668	74,407	51,334	23,073	33,209	22,064	11,145
1984-85	454,712	202,932	251,780	979,477	482,528	496,949	286,251	143,390	142,861	75,063	50,455	24,608	32,943	21,700	11,243
1985-86	446,047	196,166	249,881	987,823	485,923	501,900	288,567	143,508	145,059	73,910	49,261	24,649	33,653	21,819	11,834
1986-87[3]	427,000	188,000	240,000	987,000	475,000	512,000	291,000	142,000	148,000	73,700	48,100	25,700	34,200	22,100	12,100
1987-88[4]	424,000	182,000	242,000	989,000	474,000	515,000	290,000	142,000	148,000	74,400	48,600	25,800	33,500	21,100	12,400
1988-89[4]	425,000	181,000	244,000	989,000	472,000	517,000	290,000	142,000	148,000	74,300	47,900	26,400	33,600	20,800	12,800
1989-90[4]	427,000	182,000	245,000	984,000	471,000	513,000	290,000	142,000	148,000	74,300	47,300	27,000	33,700	20,600	13,100

[1] Includes first-professional degrees.

[2] First-professional degrees are included with bachelor's degrees.

[3] Estimated.

[4] Projected.

—Data not available.

NOTE.—Some data have been revised from previously published figures.

SOURCE: Earned Degrees Conferred Series, 1971-72 through 1986-87, National Center for Education Statistics

TABLE 2-14

PROPORTION OF BACHELOR'S AND MASTER'S DEGREES AWARDED TO WOMEN, BY FIELD, SELECTED YEARS, 1971-72 - 1986-87

	1971-72	1973-74	1975-76	1977-78	1978-79	1980-81	1982-83	1983-84	1984-85	1985-86	1986-87
BACHELOR'S DEGREES											
Agricultural & Nat. Resources	5.5%	9.7%	18.3%	24.6%	27.1%	30.8%	32.6%	31.6	31.1	31.4	31.2
Architecture & Environ. Design	12.0	14.8	19.2	23.7	25.8	28.1	34.8	35.8	35.5	36.1	37.3
Area Studies	52.5	54.3	55.5	59.7	58.2	60.1	63.0	58.9	61.7	60.7	61.7
Biological/Life Sciences	29.6	31.5	34.8	38.7	40.6	44.1	46.1	46.8	47.8	48.1	48.5
Business & Management	9.7	13.1	19.8	27.3	30.7	36.7	42.0	42.8	45.1	45.0	46.5
Communications	35.5	38.4	41.5	46.9	50.0	54.7	58.6	59.1	59.6	59.5	60.0
Communications Technologies							47.4	44.7	46.7	46.7	46.7
Computer & Inform. Science	13.6	16.4	19.8	25.8	28.1	32.5	36.3	37.1	36.8	35.7	34.6
Education	74.1	73.5	72.8	72.5	73.2	75.0	75.8	76.0	75.9	75.9	76.2
Engineering	1.1	1.6	3.4	7.41	9.1	11.1	13.3	14.1	14.5	14.5	15.2
Engineering Technologies	0.8	1.4	2.1	2.8	3.5	5.8	8.0	7.8	7.7	7.8	7.7
Fine & Applied Arts/Vis., Perf. Arts	59.9	60.2	60.9	62.0	62.5	63.4	62.8	62.1	61.8	61.3	62.0
Foreign Languages	75.1	76.4	76.4	76.1	76.0	75.6	74.3	73.2	73.4	72.4	72.6
Health Professions/Sciences	75.7	77.4	78.8	80.6	82.0	83.5	84.2	84.3	84.8	85.0	85.5
Home Economics	96.5	96.4	95.9	95.6	95.1	95.0	94.3	93.8	93.5	93.1	92.5
Law	6.6	10.5	18.8	28.6	40.4	50.0	58.4	58.1	61.2	65.0	68.6
Letters	60.1	58.0	56.9	57.2	58.0	59.8	65.8	65.9	65.8	65.7	65.8
Liberal/General Studies							54.1	53.7	55.3	55.1	56.4
Library Science	93.3	92.6	93.1	88.5	94.6	94.1	89.2	87.1	87.1	89.2	85.6
Mathematics	39.1	41.0	40.7	41.3	41.7	42.8	43.8	44.2	46.1	46.5	46.4
Military Science	0.0	0.3	0.2	2.3	3.5	3.9	10.9	8.2	8.7	8.2	6.8
Parks, Recreation							63.0	62.8	62.1	62.5	60.2
Philosophy/Religion							33.0	33.2	33.7	33.3	35.7
Physical Sciences	15.1	16.6	19.2	21.5	22.6	24.6	27.3	27.6	27.9	27.4	28.4
Protective Services							39.5	38.3	38.5	37.3	38.3
Psychology	46.4	50.5	54.4	58.9	61.3	65.0	67.5	67.9	68.1	69.0	68.9
Public Affairs & Services	47.9	43.5	43.7	49.6	53.5	58.0	69.9	68.1	66.5	66.3	68.0
Social Sciences	36.3	[illegible]	37.9	40.6	42.0	44.2	44.6	44.1	44.1	43.8	44.0
Theology	27.8	28.1	27.3	24.1	25.6	25.4	27.1	26.2	27.1	26.3	24.2
Interdisciplinary Studies	31.1	37.1	45.0	47.3	49.9	51.0	49.6	50.9	52.2	52.2	53.4
ALL DISCIPLINES	**43.7**	**44.4**	**45.6**	**47.2**	**48.3**	**49.8**	**50.6**	**50.5**	**50.7**	**50.8**	**51.5**
MASTER'S DEGREES											
Agricultural & Nat. Resources	7.1	9.8	14.3	18.7	20.2	23.5	26.5	28.5	27.5	28.9	30.1
Architecture & Environ. Design	14.6	18.4	20.0	26.0	28.5	29.1	33.8	31.8	34.4	34.7	34.0
Area Ethnic Studies	40.7	38.9	45.3	47.8	49.0	51.6	50.2	47.9	47.2	46.9	46.9
Biological Life Sciences	33.1	30.6	31.8	35.5	37.7	38.9	43.6	44.5	47.7	47.8	48.7
Business & Management	3.9	6.6	11.6	16.9	19.1	25.0	28.9	30.1	31.0	31.1	33.0
Communications	34.4	36.8	41.8	49.3	48.5	53.4	54.0	57.0	58.2	59.9	59.2
Communications Technologies							51.0	37.8	38.3	36.5	36.5
Computer & Inform. Science	11.4	12.9	14.5	18.7	18.8	23.0	28.3	29.3	28.7	29.9	29.4
Education	57.3	59.9	64.3	67.7	68.6	71.5	72.3	72.0	72.5	72.9	74.0
Engineering	1.6	2.3	3.6	5.2	6.1	8.1	9.3	10.4	10.7	11.4	12.5
Engineering Technologies	0.4	4.3	4.3	6.9	6.7	12.1	9.8	10.8	10.5	16.1	13.6
Fine & Applied Arts/Vis.,Perf. Arts	46.3	45.9	48.9	52.1	53.9	53.0	54.1	54.3	55.3	55.1	55.8
Foreign Languages	65.1	66.1	66.7	70.8	69.6	67.0	65.7	67.8	67.6	70.4	70.4
Health Professions/Sciences	56.4	60.2	66.5	70.3	71.1	73.9	75.2	75.5	76.2	76.1	78.9
Home Economics	92.7	91.1	91.5	91.9	91.2	90.2	90.8	88.6	88.3	87.8	87.6
Law	5.8	7.1	12.0	14.6	15.5	17.8	23,3	23.0	23.3	25.1	26.8
Letters	57.7	56.6	58.3	61.8	61.3	61.1	65.1	64.6	65.2	65.5	65.0
Liberal/General Studies							61.5	64.5	61.9	61.2	59.2
Library Science	79.9	77.8	78.3	80.0	80.4	82.7	81.5	79.9	80.5	80.1	79.1
Mathematics	29.8	31.0	34.0	34.0	34.7	34.1	34.5	34.7	35.0	35.2	39.1
Military Science	0.0	0.0	0.0	2.2	0.0	0.0	0.9	0.8	0.8	2.4	2.4
Parks, Recreation							53.3	54.2	55.7	52.7	55.3
Philosophy/Religion							38.9	35.7	39.9	39.7	37.0
Physical Sciences	14.1	14.6	15.0	17.0	18.2	18.4	21.4	22.5	23.2	24.2	24.9
Protective Services							26.9	26.1	31.2	30.3	29.4
Psychology	38.4	39.8	46.7	52.0	54.1	58.0	61.4	63.0	63.8	64.8	65.2
Public Affairs & Services	47.0	45.3	45.3	47.9	50.8	55.4	62.4	61.8	63.0	62.5	63.7
Social Sciences	28.2	28.8	31.6	33.2	35.3	37.6	37.8	37.9	38.3	39.2	39.5
Theology	23.4	27.2	32.1	30.5	32.0	33.6	27.1	33.3	34.8	35.8	33.9
Interdisciplinary Studies	39.2	45.8	46.5	37.5	38.8	39.8	42.8	40.8	42.1	42.2	42.0
All Disciplines	**40.6**	**43.1**	**46.4**	**48.3**	**49.1**	**50.3**	**50.1**	**49.5**	**49.9**	**50.3**	**51.2**

Source: Earned Degrees Conferred Series, 1950–1987, National Center for Education Statistics, Redefined by the National Science Foundation

TABLE 2-15

PhD DEGREES BY SCIENCE AND ENGINEERING FIELD AND SEX (1950 – 1987)

	All Fields			Science/Engineering Fields																						All Other Fields		
				Total S/E				Physical Sciences			Engineering			Math/Comp Sci			Life Sciences			Psychology			Social Sciences					
Year	Total	Women	W	Number	T	Women	W	No.	omen	%W	No.	omen	W	No.	omen	%W	No.	Women	W	No.	Women	%W	No.	Women	W	No.	Women	%W
1950	6,633	643	10	3,890	59	244	6	1,498	49	3	417	1	0.2	160	9	6	1,033	96	9	263	42	16	499	48	10	2,743	399	15
1951	7,338	674	9	4,618	63	291	6	1,681	64	4	520	1	0.2	184	9	5	1,192	102	9	425	57	13	616	58	9	2,720	383	14
1952	7,683	714	9	4,783	62	294	6	1,720	57	3	529	3	0.6	206	11	5	1,187	94	8	540	73	14	601	56	9	2,900	420	14
1953	8,309	792	10	5,114	62	322	6	1,714	62	4	518	1	0.2	241	14	6	1,443	123	9	583	79	14	615	43	7	3,195	470	15
1954	8,996	815	9	5,433	60	310	6	1,686	61	4	594	0	0.0	227	14	6	1,628	111	7	619	66	11	679	58	9	3,563	505	14
1955	8,840	826	9	5,436	61	302	6	1,713	52	3	600	0	0.0	250	11	4	1,505	107	7	685	84	12	661	48	7	3,404	524	15
1956	8,903	885	10	5,327	60	349	7	1,667	68	4	610	0	0.0	236	10	4	1,404	123	9	634	86	14	777	62	8	3,576	536	15
1957	8,756	939	11	5,233	60	345	7	1,674	71	4	598	1	0.2	249	13	5	1,449	122	8	550	90	16	715	48	7	3,523	594	17
1958	8,942	964	11	5,353	60	378	7	1,655	66	4	647	4	0.6	247	15	6	1,465	144	10	572	84	15	767	65	8	3,589	586	16
1959	9,360	989	11	5,635	60	376	7	1,812	69	4	714	1	0.1	262	16	6	1,427	120	8	635	96	15	785	73	10	3,725	613	16
50–59	83,760	8,241	10	50,822	61	3,211	6	16,820	619	4	5,744	12	0.2	2,261	121	5	13,733	1,141	8	5,529	759	14	6,715	559	8	32,938	5,030	15
1960	9,829	1,028	10	6,056	62	382	6	1,838	62	3	786	3	0.4	303	18	6	1,647	126	8	641	97	15	841	76	9	3,773	646	17
1961	10,575	1,112	11	6,531	62	449	7	1,991	70	4	943	6	0.6	344	17	5	1,646	144	9	703	136	19	904	76	8	4,044	663	16
1962	11,622	1,245	11	7,249	62	501	7	2,122	87	4	1,207	4	0.3	396	24	6	1,804	161	9	781	149	19	939	76	8	4,373	744	17
1963	12,822	1,374	11	8,055	63	573	7	2,380	95	4	1,378	11	0.8	490	36	7	1,908	184	10	844	144	17	1,055	103	10	4,767	801	17
1964	14,490	1,535	11	9,025	62	632	7	2,455	113	5	1,693	7	0.4	596	29	5	2,181	203	9	939	182	19	1,161	98	8	5,465	903	17
1965	16,467	1,775	11	10,252	62	709	7	2,829	127	4	2,124	10	0.5	688	60	9	2,474	246	10	847	159	19	1,290	107	8	6,215	1,066	17
1966	18,239	2,118	12	11,298	62	875	8	3,045	131	4	2,304	9	0.4	801	57	7	2,696	314	12	1,046	220	21	1,406	144	10	6,941	1,243	18
1967	20,621	2,457	12	12,759	62	1,013	8	3,462	162	5	2,614	11	0.4	870	60	7	2,900	354	12	1,231	232	19	1,682	194	12	7,862	1,444	18
1968	23,091	2,906	13	14,128	61	1,204	9	3,593	186	5	2,932	12	0.4	983	52	5	3,445	452	13	1,268	288	23	1,907	214	11	8,963	1,702	19
1969	26,189	3,436	13	15,839	60	1,375	9	3,859	206	5	3,377	12	0.4	1,161	70	6	3,779	484	13	1,551	356	23	2,112	247	12	10,350	2,061	20
60–69	163,945	18,986	12	101,192	62	7,713	8	27,574	1,241	5	19,356	85	0.4	6,632	423	6	24,480	2,668	11	9,851	1,961	20	13,297	1,335	10	62,753	11,273	18
1970	29,872	3,980	13	17,639	59	1,527	9	4,313	236	5	3,681	24	0.7	1,343	98	7	4,131	499	12	1,668	372	22	2,503	298	12	12,233	2,453	20
1971	32,113	4,579	14	18,466	58	1,800	10	4,391	246	6	3,654	23	0.6	1,327	96	7	4,534	624	14	1,782	427	24	2,778	384	14	13,647	2,779	20
1972	33,369	5,274	16	18,412	55	1,910	10	4,103	273	7	3,704	26	0.7	1,295	101	8	4,478	647	14	1,881	467	25	2,951	397	13	14,957	3,364	22
1973	34,790	6,215	18	18,598	53	2,288	12	4,016	274	7	3,580	64	1.8	1,264	117	9	4,524	734	16	2,089	605	29	3,145	494	16	16,192	3,927	24
1974	33,826	6,452	19	17,865	53	2,412	14	3,631	253	7	3,336	56	1.6	1,229	109	9	4,220	732	17	2,339	691	30	3,110	572	18	15,961	4,040	25
1975	34,066	7,267	21	17,764	52	2,637	15	3,628	302	8	3,161	67	2.1	1,188	124	10	4,252	782	18	2,442	754	31	3,123	608	19	16,302	4,630	28
1976	34,076	7,803	23	17,288	51	2,786	16	3,433	300	9	2,836	69	2.4	1,100	117	11	4,203	791	19	2,581	819	32	3,136	690	22	16,788	5,017	30
1977	33,244	8,094	24	16,937	51	2,958	17	3,344	320	10	2,599	74	2.8	1,039	128	12	4,199	791	19	2,761	991	36	2,995	654	22	16,307	5,136	31
1978	32,156	8,487	26	16,196	50	3,039	19	3,137	312	10	2,442	57	2.3	1,001	139	14	4,179	872	21	2,597	971	37	2,840	688	24	15,960	5,448	34
1979	32,756	9,201	28	16,363	50	3,310	20	3,104	350	11	2,517	83	3.3	966	152	16	4,403	974	22	2,674	1,071	40	2,699	680	25	16,393	5,891	36
70–79	330,288	67,352	20	175,548	53	24,667	14	37,100	2,866	8	31,479	541	1.7	11,752	1,181	10	43,123	7,446	17	22,814	7,168	31	29,280	5,465	19	154,740	42,685	28
1980	32,632	9,682	30	16,483	51	3,543	21	3,096	386	12	2,519	96	3.8	964	127	13	4,492	1,050	23	2,776	1,171	42	2,636	713	27	16,149	6,139	38
1981	32,958	10,247	31	16,935	51	3,754	22	3,141	378	12	2,561	104	4.1	980	139	14	4,658	1,168	25	2,956	1,274	43	2,639	693	26	16,023	6,493	41
1982	32,647	10,423	32	16,862	52	3,890	23	3,286	451	14	2,621	136	5.3	932	115	12	4,693	1,233	26	2,780	1,262	45	2,550	691	27	15,785	6,533	41
1983	32,775	10,875	33	17,016	52	4,174	25	3,268	456	14	2,822	125	4.4	960	150	16	4,360	1,204	28	3,108	1,487	48	2,507	760	30	15,759	6,701	43
1984	33,209	11,155	34	17,117	52	4,216	25	3,298	489	15	2,979	165	5.5	946	152	16	4,448	1,196	27	2,973	1,458	49	2,473	759	31	16,092	6,939	43
1985	32,943	11,234	34	17,425	53	4,379	25	3,390	552	16	3,221	207	6.4	947	134	14	4,489	1,278	28	2,908	1,416	49	2,470	792	32	15,518	6,855	44
1986	33,653	11,834	35	18,073	54	4,731	26	3,551	588	17	3,400	228	6.7	1,086	169	16	4,352	1,306	30	3,088	1,591	52	2,596	849	33	15,580	7,103	46
1987	34,120	12,021	35	18,484	54	4,855	26	3,671	634	17	3,809	251	6.9	1,099	178	16	4,336	1,352	31	3,123	1,665	53	2,444	765	31	15,636	7,166	46
80–87	264,937	87,471	33	138,395	52	33,542	24	26,701	3,934	15	23,922	1,324	5.5	7,914	1,164	15	35,834	9,786	27	23,710	11,322	48	20,314	6,012	30	126,542	53,929	43
TOTAL	842,930	182,050	22	465,957	55	69,133	15	108,195	8,660	8	80,503	1,962	2.4	28,579	2,889	10	117,170	21,041	18	61,904	21,210	34	69,606	13,371	19	376,973	112,917	30

Source: Earned Degrees Conferred Series, 1950–1987, National Center for Education Statistics, Redefined by the National Science Foundation

TABLE 2-15 (continued)

MASTERS DEGREES BY SCIENCE AND ENGINEERING FIELD AND SEX (1950 – 1987)

				Science/Engineering Fields																								
	All Fields			Total S/E				Physical Sciences			Engineering			Math/Comp Sci			Life Sciences			Psychology			Social Sciences			All Other Fields		
Year	Total	Women	W	Number	T	Women	W	No.	Women	%W	No.	Women	%W	No.	Women	W	No.	Women	W	No.	Women	%W	No.	Women	%W	No.	Women	%W
1950	58,219	16,982	29	16,596	29	1,856	11	3,184	265	8	4,496	15	0.3	974	190	20	4,158	534	13	1,316	366	28	2,466	484	20	41,623	15,126	36
1951	65,132	18,901	29	17,539	27	1,713	10	3,200	226	7	4,825	10	0.2	1,109	180	16	4,417	527	12	1,645	395	24	2,343	375	16	47,593	17,188	36
1952	63,471	19,934	31	15,544	24	1,527	10	3,054	224	7	4,091	18	0.4	802	139	17	4,184	467	11	1,406	340	24	2,007	339	17	47,927	18,407	38
1953	61,023	20,034	33	13,548	22	1,290	10	2,711	164	6	3,566	13	0.4	677	112	17	3,568	410	11	1,161	265	23	1,865	326	17	47,475	18,744	39
1954	56,823	18,676	33	13,399	24	1,352	10	2,374	177	7	4,204	15	0.4	706	127	18	3,007	358	12	1,254	369	29	1,854	306	17	43,424	17,324	40
1955	58,204	19,464	33	13,989	24	1,563	11	2,544	207	8	4,484	13	0.3	761	148	19	3,090	433	14	1,293	417	32	1,817	345	19	44,215	17,901	40
1956	59,294	19,897	34	14,061	24	1,438	10	2,655	220	8	4,724	19	0.4	898	179	20	2,867	406	14	973	283	29	1,944	331	17	45,233	18,459	41
1957	61,956	20,623	33	15,206	25	1,573	10	2,704	221	8	5,233	16	0.3	965	188	19	3,019	403	13	1,096	332	30	2,189	413	19	46,750	19,050	41
1958	65,614	21,362	33	16,840	26	1,779	11	3,034	271	9	5,788	20	0.3	1,234	240	19	3,179	468	14	1,236	399	32	2,370	381	16	48,774	19,583	40
1959	69,584	22,176	32	18,682	27	1,976	11	3,179	270	8	6,753	24	0.4	1,499	311	21	3,537	561	16	1,254	397	32	2,460	413	17	50,902	20,200	40
50–59	619,319	198,049	32	155,403	25	16,067	10	28,639	2,245	8	48,164	163	0.3	9,625	1,814	19	35,026	4,557	13	12,632	3,565	28	21,317	3,723	17	463,916	181,982	39
1960	74,497	23,560	32	20,012	27	2,074	10	3,387	327	10	7,159	26	0.4	1,765	337	19	3,751	573	15	1,406	425	30	2,544	386	15	54,485	21,486	39
1961	78,269	24,111	31	22,786	29	2,464	11	3,799	345	9	8,178	28	0.3	2,236	466	21	4,085	670	16	1,719	543	32	2,767	412	15	55,483	21,647	39
1962	84,889	26,184	31	25,146	30	2,812	11	3,929	365	10	8,909	40	0.4	2,680	501	19	4,672	765	17	1,832	603	33	3,124	538	17	59,743	23,372	39
1963	91,418	28,474	31	27,367	30	3,194	12	4,132	428	10	9,635	32	0.3	3,323	658	20	4,718	894	19	1,918	573	30	3,641	609	17	64,051	25,280	39
1964	101,122	32,110	32	30,271	30	3,567	12	4,567	410	9	10,827	34	0.3	3,603	689	19	5,367	1,084	20	2,059	686	33	3,848	662	17	70,851	28,543	40
1965	112,195	35,984	32	33,835	30	4,082	12	4,918	513	10	12,056	44	0.4	4,294	812	19	5,978	1,162	19	2,241	732	33	4,348	819	19	78,360	31,902	41
1966	140,772	47,588	34	38,083	27	4,882	13	4,992	528	11	13,678	76	0.6	5,010	1,015	20	6,666	1,380	21	2,530	850	34	5,207	1,030	20	102,689	42,706	42
1967	157,892	54,713	35	41,800	26	5,717	14	5,412	553	10	13,885	78	0.6	5,733	1,310	23	7,465	1,517	20	3,138	1,062	34	6,167	1,197	19	116,092	48,996	42
1968	177,150	63,401	36	45,425	26	6,512	14	5,508	635	12	15,188	99	0.7	6,081	1,361	22	8,315	1,864	22	3,482	1,159	33	6,851	1,394	20	131,725	56,889	43
1969	194,414	72,533	37	48,425	25	7,314	15	5,911	668	11	15,243	113	0.7	6,735	1,566	23	8,809	2,016	23	4,013	1,327	33	7,714	1,624	21	145,989	65,219	45
60–69	1,212,618	408,658	34	333,150	27	42,618	13	46,555	4,792	10	114,758	570	0.5	41,462	8,718	21	59,818	11,945	20	24,338	7,922	33	46,221	8,671	19	879,468	366,040	42
1970	209,387	83,241	40	49,318	24	8,577	17	5,948	847	14	15,597	172	1.1	7,107	1,809	25	8,590	2,216	26	4,120	1,566	38	7,956	1,967	25	160,069	74,664	47
1971	231,486	92,896	40	50,624	22	8,658	17	6,386	853	13	16,347	187	1.1	6,789	1,688	25	8,320	2,190	26	4,438	1,651	37	8,344	2,089	25	180,862	84,238	47
1972	252,774	102,689	41	53,567	21	9,557	18	6,307	888	14	16,802	281	1.7	7,186	1,777	25	8,914	2,327	26	5,293	2,033	38	9,065	2,251	25	199,207	93,132	47
1973	264,525	109,525	41	54,234	21	9,760	18	6,274	847	14	16,758	288	1.7	7,148	1,730	24	9,060	2,237	25	5,882	2,367	40	9,094	2,291	25	210,291	99,765	47
1974	278,259	119,915	43	54,175	19	10,545	19	6,087	887	15	15,393	362	2.4	7,116	1,793	25	9,605	2,410	25	6,616	2,630	40	9,358	2,463	26	224,084	109,370	49
1975	293,651	131,536	45	53,852	18	11,005	20	5,830	848	15	15,434	398	2.6	6,637	1,769	27	9,618	2,411	25	7,104	3,045	43	9,229	2,539	28	239,799	120,531	50
1976	313,001	145,256	46	54,747	17	12,072	22	5,485	825	15	16,170	580	3.6	6,408	1,690	26	9,823	2,619	27	7,850	3,671	47	8,944	2,678	30	258,254	133,184	52
1977	318,241	150,031	47	56,731	18	13,154	23	5,345	887	17	16,889	733	4.3	6,498	1,766	27	10,707	3,011	28	8,320	4,004	48	8,974	2,753	31	261,510	136,877	52
1978	312,816	151,108	48	56,237	18	13,690	24	5,576	946	17	17,015	871	5.1	6,421	1,717	27	10,711	3,236	30	8,194	4,283	52	8,320	2,667	32	256,579	137,418	54
1979	302,075	148,303	49	54,456	18	14,040	26	5,464	992	18	16,193	990	6.1	6,101	1,632	27	10,719	3,460	32	8,031	4,343	54	7,948	2,623	33	247,619	134,263	54
70–79	2,776,215	1,234,500	44	537,941	19	111,058	21	58,702	8,820	15	162,598	4,860	3.0	67,465	17,368	26	98,087	26,107	27	65,857	29,573	45	87,232	24,321	28	2,238,274	1,123,442	50
1980	299,095	147,936	49	54,391	18	14,363	26	5,233	975	19	16,846	1,190	7.1	6,516	1,800	28	10,278	3,326	32	7,661	4,464	57	7,858	2,628	34	244,704	133,573	55
1981	295,739	148,696	50	53,710	18	14,875	28	5,284	1,084	21	16,386	1,323	8.1	6,765	1,846	27	9,682	3,261	34	7,000	4,640	66	7,575	2,721	36	242,029	133,821	55
1982	295,546	150,014	51	56,788	19	15,766	28	5,514	1,198	22	17,526	1,573	9.0	7,662	2,216	29	9,755	3,472	36	7,791	4,582	59	7,540	2,729	36	238,758	134,248	56
1983	290,021	145,224	50	57,830	20	16,873	29	5,277	1,131	21	18,830	1,746	9.3	8,158	2,487	30	9,654	3,584	37	8,378	5,140	61	7,533	2,785	37	232,191	128,351	55
1984	284,263	140,668	49	58,875	21	17,396	30	5,550	1,304	23	20,094	2,096	10.4	8,931	2,761	31	8,998	3,454	38	8,002	5,041	63	7,300	2,740	38	225,388	123,272	55
1985	286,251	142,861	50	60,588	21	18,018	30	5,782	1,340	23	20,926	2,242	10.7	9,963	3,045	31	8,455	3,387	40	8,409	5,344	64	7,034	2,660	38	225,663	124,843	55
1986	288,567	145,059	50	62,457	22	18,871	30	5,896	1,329	23	21,661	2,493	11.5	11,229	3,524	31	8,283	3,387	41	8,293	5,370	65	7,115	2,768	39	226,110	126,188	56
1987	289,557	146,194	51	62,505	22	19,301	31	5,646	1,408	25	22,061	2,769	12.5	11,812	3,793	32	8,024	3,373	42	8,204	5,348	65	6,735	2,610	39	227,052	126,893	57
80–86	2,329,039	1,168,652	50	466,144	20	135,485	29	44,185	9,767	22	154,350	15,432	10.0	71,075	21,472	30	73,109	27,224	37	64,936	38,949	62	58,490	21,641	37	1,862,895	1,033,167	55
TOTAL	6,937,191	3,009,859	43	1,492,638	22	305,228	20	178,081	25,624	14	479,870	21,034	4.4	189,627	49,372	26	264,038	69,833	26	167,762	81,009	48	213,260	58,366	27	5,444,553	2,704,631	50

Source: Earned Degrees Conferred Series, 1950-1987, National Center for Education Statistics, Redefined by the National Science Foundation

TABLE 2-15 (continued)

BACHELORS DEGREES BY SCIENCE AND ENGINEERING FIELD AND SEX (1950 - 1987)

	All Fields			Science/Engineering Fields																						All Other Fields		
				Total S/E				Physical Sciences			Engineering			Math/Comp Sci			Life Sciences			Psychology			Social Sciences					
Year	Total	Women	%W	Number	%T	Women	%W	Number	Women	%W	Number	Women	%W	Number	Women	%W	Number	Women	%W	Number	Women	%W	Number	Women	%W	Number	Women	%W
1950	433,734	103,915	24	154,933	36	18,215	12	17,725	1,737	10	52,246	175	0	6,392	1,446	23	39,101	4,928	13	9,582	3,524	37	29,887	6,405	21	278,801	85,700	31
1951	384,352	105,009	27	125,957	33	16,135	13	14,296	1,420	10	41,473	87	0	5,753	1,442	25	32,271	4,253	13	7,819	2,983	38	24,345	5,950	24	258,395	88,874	34
1952	331,924	104,895	32	100.411	30	15,309	15	12,145	1,332	11	30,549	60	0	4,721	1,332	28	25,231	3,805	15	6,622	2,839	43	21,143	5,941	28	231,513	89,586	39
1953	304,857	104,037	34	86,142	28	14,068	16	10,414	1,277	12	24,189	37	0	4,396	1,274	29	21,835	3,475	16	5,946	2,516	42	19,362	5,489	28	218,715	89,969	41
1954	292,880	105,380	36	82,376	28	14,270	17	9,880	1,273	13	22.329	65	0	4,090	1,368	33	21,584	3,505	16	5,758	2,673	46	18,735	5,386	29	210,504	91,110	43
1955	287,401	103,799	36	80,901	28	13,778	17	10,516	1,382	13	22,589	62	0	4,034	1,310	32	19,927	3,250	16	5,532	2,523	46	18,303	5,251	29	206,500	90,021	44
1956	311,298	111,727	36	87,720	28	14,474	17	11,672	1,501	13	26,312	76	0	4,660	1,523	33	19,890	3,382	17	5,665	2,557	45	19,521	5,435	28	223,578	97,253	43
1957	340,347	117,609	35	98,509	29	15,291	16	12,934	1,613	12	31,211	81	0	5,546	1,720	31	21,903	3,576	16	6,191	2,666	43	20,724	5,635	27	241,838	102,318	42
1958	365,748	122,800	34	108,727	30	15,921	15	14,352	1,669	12	35,332	109	0	6,924	1,971	28	23,069	3,670	16	6,930	2,867	41	22,120	5,635	25	257,021	106,879	42
1959	385,151	130,283	34	116,802	30	17,327	15	15,460	1,766	11	38,134	121	0	9,019	2.515	28	23,861	4,127	17	7,383	2,906	39	22,945	5,892	26	268,349	112,956	42
50-59	3,437,692	1,109,454	32	1,042,478	30	154,788	15	129,394	14,970	12	324,364	873	0	55,535	15,901	29	248,672	37,971	15	67,428	28,054	42	217,085	57,019	26	2,395,214	954,666	40
1960	394,889	139,385	35	120,937	31	19,362	16	16,057	2,016	13	37,808	145	0	11,437	3,125	27	24,141	4,491	19	8,111	3,326	41	23,383	6,259	27	273,952	120,023	44
1961	401,784	145,884	36	121,660	30	20,595	17	15,500	2,008	13	35,866	134	0	13,127	3,644	28	23,900	4,822	20	8,524	3,431	40	24,743	6,556	26	280,124	125,269	45
1962	420,485	158,470	38	127,469	30	23,485	18	15,894	2,146	14	34,735	125	0	14,610	4,255	29	25,200	5,470	22	9,638	3,821	40	27,392	7,668	28	293,016	134,985	46
1963	450,592	175,842	39	135,964	30	27,099	20	16,276	2,238	14	33,458	130	0	16,121	4,958	31	27,801	6,174	22	11,062	4,557	41	31,246	9,042	29	314,628	148,743	47
1964	502,104	202,291	40	153,361	31	32,473	21	17,527	2,450	14	35,226	159	0	18,677	5,995	32	31,611	7,213	23	13,359	5,516	41	36,561	11,140	30	348,743	169,818	49
1965	538,930	219,260	41	164,936	31	36,213	22	17,916	2,532	14	36,795	139	0	19,668	6,453	33	34,842	8,277	24	14,721	6,033	41	40,994	12,779	31	373,994	183,047	49
1966	555,613	224,491	40	173,471	31	39,482	23	17,186	2,333	14	35,815	146	0	20,182	6,702	33	36,864	8,464	23	17,022	6,981	41	46,402	14,856	32	382,142	185,009	48
1967	594,862	239,562	40	187,849	32	44,002	23	17,794	2,402	13	36,188	184	1	21,530	7,334	34	39,408	8,946	23	19,496	7,806	40	53,433	17,328	32	407,013	195,560	48
1968	671,591	278,761	42	212,174	32	53,463	25	19,442	2,674	14	37,614	211	1	24,084	8,841	37	43,260	10,091	23	23,972	10,144	42	63,892	21,502	34	459,417	225,298	49
1969	769,683	322,750	42	244,519	32	63,196	26	21,591	2,952	14	41,553	313	1	28,263	10,348	37	48,713	11,308	23	29,495	12,719	43	74,904	25,556	34	525,164	259,554	49
60-69	5,300,533	2,106,696	40	1,642,340	31	359,370	22	175,183	23,751	14	365,058	1,686	0	187,699	61,655	33	335,740	75,258	22	155,400	64,334	41	423,260	132,686	31	3,658,193	1,747,326	48
1970	833,322	346,373	42	264,122	32	68,878	26	21,551	2,969	14	44,772	338	1	29,109	10,516	36	52,129	11,875	23	33,854	14,741	44	82,707	28,439	34	569,200	277,495	49
1971	884,386	370,166	42	271,176	31	72,996	27	21,549	3,014	14	45,387	365	1	27,306	9,818	36	51,461	11,803	23	38,154	17,037	45	87,319	30,959	35	613,210	297,170	48
1972	937,884	393,232	42	281,228	30	77,671	28	20,887	3,148	15	46,003	501	1	27,250	9,784	36	53,484	12,694	24	43,421	20,154	46	90,183	31,390	35	656,656	315,561	48
1973	980,707	412,346	42	295,391	30	83,839	28	20,809	3,121	15	46,989	580	1	27,528	9,985	36	59,486	14,570	24	48,096	22,986	48	92,483	32,597	35	685,316	328,507	48
1974	1,008,654	428,843	43	305,062	30	91,793	30	21,287	3,536	17	43,530	706	2	26,570	9,719	37	68,226	17,836	26	52,256	26,407	51	93,193	33,589	36	703,592	337,050	48
1975	987,922	430,268	44	294,920	30	93,342	32	20,896	3,838	18	40,065	860	2	23,385	8,656	37	72,710	20,811	29	51,436	27,103	53	86,428	32,074	37	693,002	336,926	49
1976	997,504	435,745	44	292,174	29	95,597	33	21,559	4,139	19	39,114	1,443	4	21,749	7,678	35	77,301	23,789	31	50,363	27,376	54	82,088	31,172	38	705,330	340,148	48
1977	993,008	441,219	44	288,543	29	97,453	34	22,618	4,551	20	41,581	2,086	5	20,729	7,488	36	78,472	25,609	33	47,794	27,102	57	77,349	30,617	40	704,465	343,766	49
1978	997,165	453,546	45	288,167	29	100,060	35	23,175	4,987	22	47,411	3,497	7	19,925	7,110	36	77,130	26,954	35	45,057	26,540	59	75,461	30,972	41	708,998	353,486	50
1979	1,000,562	466,259	47	288,625	29	102,292	35	23,363	5,287	23	53,720	4,919	9	20,670	7,421	36	75,085	27,548	37	43,012	26,363	61	72,775	30,754	42	711,937	363,967	51
70-79	9,621,114	4,177,997	43	2,869,408	30	883,921	31	217,694	38,590	18	448,572	15,295	3	244,221	88,175	36	665,492	193,489	29	453,443	235,809	52	839,986	312,563	37	6,751,706	3,294,076	49
1980	1,010,777	480,039	47	291,983	29	105,974	36	23,661	5,651	24	59,240	6,014	10	22,686	8,247	36	71,617	27,596	39	42,513	26,923	63	72,266	31,543	44	718,794	374,065	52
1981	935,140	465,257	50	291,204	31	106,783	37	23,052	5,888	25	63,287	7,024	11	26,199	9,655	37	66,832	26,786	40	40,833	26,538	65	70,101	30,892	44	643,936	358,474	56
1982	952,998	479,634	50	298,468	31	111,473	37	24,052	6,186	26	67,021	8,231	12	31,866	12,055	38	63,884	26,282	41	41,031	27,408	67	70,614	31,311	44	654,530	368,161	56
1983	969,504	490,370	51	305,866	32	114,022	37	23,234	6,350	27	72,248	9,601	13	36,963	14,362	39	64,119	25,937	40	40,364	27,259	68	68,938	30,513	44	663,638	376,348	57
1984	974,309	491,990	50	308,510	32	115,358	37	23,525	6,487	28	75,732	10,668	14	45,383	17,771	39	55,863	23,766	43	39,872	27,080	68	68,135	29,586	43	665,799	376,632	57
1985	979,477	496,949	51	313,951	32	118,837	38	23,597	6,586	28	77,154	11,195	15	54,024	21,281	39	54,248	23,501	43	39,811	27,117	68	67,117	29,157	43	665,526	378,112	57
1986	987,823	501,900	51	318,504	32	120,566	38	21,620	5,927	27	76,333	11,049	14	58,195	22,547	39	53,203	23,314	44	40,521	27,043	69	68,632	29,788	43	669,319	381,334	57
1987	991,339	510,485	51	313,720	32	120,852	39	19,885	5,632	28	73,797	11,250	15	56,277	21,390	38	51,127	22,704	44	42,868	29,536	69	69,766	30,340	43	677,619	389,633	58
80-87	7,801,367	3,916,624	50	2,444,206	31	913,865	37	183,526	48,707	27	564,812	75,032	13	331,593	127,308	38	480,893	199,886	42	327,813	219,804	67	555,569	243,128	44	5,357,161	3,002,759	56
TOTAL	26,160,706	11,310,771	43	7,998,432	31	2,311,944	29	705,797	126,018	18	1,702,806	92,886	5	819,048	293,039	36	1,730,797	508,604	29	1,004,084	548,001	55	2,035,900	745,396	37	18,162,274	8,998,827	50

SOURCE: U.S. Dept. of Education, National Center for Education Statistics, "Degrees and Other Formal Awards Conferred, 1986-87" Survey

TABLE 2-16

BACHELOR'S, MASTER'S AND DOCTORAL DEGREES CONFERRED BY SEX AND FIELD, 1986-87

DISCIPLINE DIVISION & SPECIALTY	BACHELOR'S DEGREES			MASTER'S DEGREES			DOCTOR'S DEGREES		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
TOTAL, ALL DISCIPLINE DIVISIONS	**991,339**	**480,854**	**510,485**	**289,557**	**141,363**	**148,194**	**34,120**	**22,099**	**12,021**
Agribusiness & Ag Production	**5,338**	**4,071**	**1,267**	**732**	**564**	**168**	**181**	**151**	**30**
Agricultural Sciences	**6,834**	**4,216**	**2,618**	**1,841**	**1,216**	**625**	**680**	**549**	**131**
Animal Sciences	3,181	1,751	1,430	583	364	219	196	160	36
Food Sciences	489	230	259	247	121	126	110	73	37
Plant Sciences	1,732	1,243	489	652	475	177	297	251	46
Soil Sciences	140	99	41	116	84	32	67	59	8
Agricultural Sciences, Other	107	64	43	27	18	9	9	5	4
Renewable Natural Resources	**2,819**	**2,027**	**792**	**950**	**681**	**269**	**188**	**171**	**17**
Forestry Production & Sciences	1,075	861	214	478	352	126	108	101	7
Wildlife Management	592	395	197	131	92	39	16	14	2
Natural Resources, Other	1,152	771	381	341	237	104	64	56	8
Architecture & Environmental Design Total	**8,922**	**5,590**	**3,332**	**3,142**	**2,073**	**1,069**	**92**	**66**	**26**
Architecture	4,350	3,250	1,100	1,622	1,172	450	24	21	3
Arch. & Environmental Design, other	4,572	2,340	2,232	1,520	901	619	68	45	5
Area and Ethnic Studies	**3,340**	**1,278**	**2,062**	**851**	**452**	**399**	**132**	**73**	**59**
Business & Management	**233,719**	**126,750**	**106,969**	**67,353**	**45,137**	**22,216**	**1,098**	**839**	**259**
Business & Management, General	41,773	22,654	19,119	11,871	8,187	3,684	175	145	30
Accounting	43,813	21,267	22,546	2,920	1,725	1,195	61	44	17
Banking and Finance	24,339	15,822	8,517	4,516	3,166	1,350	67	60	7
Business Administration & Mgmt.	68,344	37,862	30,482	35,941	24,237	11,704	524	381	143
Business Economics	3,555	2,346	1,209	201	143	58	59	51	8
Human Resources Development	872	420	452	784	402	382	8	5	3
Institutional Management	4,813	2,581	2,232	244	159	85	3	3	0
International Business Management	1,111	486	625	1,727	1,167	560	16	12	4
Labor/Industrial Relations	1,062	538	524	644	291	353	15	10	5
Management Information Systems	3,441	1,979	1,462	1,101	799	302	9	7	2
Management Sciences	2,206	1,327	879	713	539	174	48	39	9
Marketing Management/Research	29,573	14,445	15,128	1,828	984	844	33	24	9
Personnel Management	1,752	809	943	265	144	121	0	0	0
Business & Management, Other	7,065	4,214	2,851	4,448	3,194	1,404	80	58	22
Business & Office	**3,186**	**791**	**2,395**	**44**	**28**	**16**	**0**	**0**	**0**
Marketing & Distribution	**4,251**	**1,417**	**2,834**	**99**	**46**	**53**	**0**	**0**	**0**
Communications	**43,969**	**17,388**	**26,581**	**3,666**	**1,457**	**2,209**	**273**	**157**	**116**
Advertising	2,665	948	1,717	165	70	95	4	2	2
Journalism	10,891	3,963	6,928	1,217	481	736	25	18	7
Public Relations	1,376	405	971	60	13	47	0	0	0
Radio/TV	6,568	3,460	3,086	254	133	121	12	9	3
Communications, Other	22,491	8,639	13,879	1,970	760	1,210	232	128	104
Communications Technologies	**1,439**	**767**	**672**	**271**	**149**	**122**	**2**	**1**	**1**
Computer and Information Sciences	**39,664**	**25,929**	**13,735**	**8,491**	**5,995**	**2,496**	**374**	**322**	**52**
Comp. & Info Science, General	31,788	21,142	10,646	7,076	5,119	1,957	350	306	44
Computer Programming	346	270	76	40	32	8	0	0	0
Data Processing	754	418	336	33	23	10	0	0	0
Info. Systems & Design	4,678	2,770	1,908	974	544	420	17	12	5
Systems Analysis	454	275	179	149	121	28	0	0	0
Comp. & Inf. Sci., Other	1,644	1,054	590	229	156	73	7	4	3
Education	**87,115**	**20,770**	**66,345**	**75,501**	**19,642**	**55,859**	**6,909**	**3,117**	**3,792**
Education, General	1,883	407	1,476	7,558	2,053	5,505	1,026	438	588
Bilingual/Bicultural Education	359	115	244	409	130	279	42	23	19
Curriculum and Instruction	394	21	373	3,699	782	2,917	713	260	453
Education Administration	25	7	18	8,965	4,037	4,928	2,122	1,097	1,025
Special Education	6,996	492	6,504	8,826	1,025	7,801	230	61	169
Student Counseling/Personnel Svcs	103	23	80	9,314	2,395	6,919	441	213	228
Elementary Education	35,778	2,677	33,101	10,239	951	9,288	104	20	84
Junior High Education	549	88	461	413	61	352	0	0	0
Pre-elementary Education	3,975	85	3,890	1,415	36	1,379	26	3	23
Secondary Education	3,482	1,413	2,069	3,174	1,126	2,048	97	55	42
Agricultural Education	693	539	154	345	270	75	31	24	7
Art Education	1,213	217	996	620	143	477	49	18	31
Business Education	1,921	389	1,532	622	118	504	26	12	14

TABLE 2-16 (continued)

BACHELOR'S, MASTER'S AND DOCTORAL DEGREES CONFERRED BY SEX AND FIELD, 1986-87 (continued)

DISCIPLINE DIVISION & SPECIALTY	BACHELOR'S DEGREES			MASTER'S DEGREES			DOCTOR'S DEGREES		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
Education (continued)									
English Education	1,149	219	930	421	79	342	31	7	24
Health Education	1,693	417	1,276	679	134	545	84	29	55
Home Economics Education	650	1	649	202	1	201	13	0	13
Industrial Arts Education	2,315	2,087	228	611	488	123	39	22	17
Mathematics Education	1,426	513	913	478	164	314	33	14	19
Music Education	3,109	1,275	1,834	955	425	530	87	47	40
Physical Education	12,250	6,427	5,823	3,557	1,825	1,732	196	110	86
Reading Education	181	15	166	3,063	176	2,887	75	9	66
Science Education	1,215	505	710	481	212	269	47	32	15
Social Science Education	619	346	273	119	39	80	4	2	2
Social Studies Education	948	537	411	112	59	53	5	3	2
Trade & Industrial Education	1,284	981	303	635	348	287	78	53	25
Education, Other	2,905	974	1,931	8,589	2,565	6,024	1,310	565	745
Engineering	**73,797**	**62,547**	**11,250**	**22,081**	**19,312**	**2,769**	**3,809**	**3,548**	**261**
Engineering, General	2,737	2,294	443	1,046	920	126	228	216	12
Aerospace Engineering	3,011	2,764	247	718	663	55	128	118	10
Agricultural Engineering	559	498	61	151	138	13	68	63	5
Architectural Engineering	465	380	85	50	45	5	0	0	0
Bioengineering	637	411	226	313	231	82	58	47	11
Ceramic Engineering	301	217	84	107	81	26	34	31	3
Chemical Engineering	4,983	3,603	1,380	1,184	961	223	497	439	58
Civil Engineering	8,147	7,068	1,079	2,901	2,522	379	451	434	17
Computer Engineering	2,021	1,666	355	709	595	114	57	51	6
Elec/Electronic, Comm. Engineering	24,563	21,397	3,166	6,234	5,635	599	726	691	35
Engineering Mechanics	159	139	20	181	161	20	103	100	3
Engineering Physics	396	333	63	90	80	10	38	36	2
Engineering Science	266	207	59	206	175	31	41	38	3
Environ. Health Engineering	96	70	26	312	221	91	41	35	6
Geological Engineering	243	195	48	76	66	10	5	5	0
Geophysical Engineering	78	65	13	29	24	5	6	6	0
Industrial Engineering	4,140	2,817	1,323	1,726	1,407	319	165	145	20
Materials Engineering	411	291	120	430	332	98	210	179	31
Mechanical Engineering	15,429	13,739	1,690	3,157	2,930	227	528	511	17
Metallurgical Engineering	436	343	93	258	220	38	111	104	7
Mining & Mineral Engineering	298	266	32	89	83	6	28	26	2
Naval & Marine Engineering	428	396	32	31	30	1	5	5	0
Nuclear Engineering	323	296	27	261	234	27	90	88	2
Ocean Engineering	124	111	13	86	75	11	21	21	0
Petroleum Engineering	1,067	932	135	201	181	20	20	20	0
Surveying & Mapping Sciences	92	71	21	31	29	2	6	6	0
Systems Engineering	305	240	65	226	186	40	27	27	0
Textile Engineering	26	17	9	2	2	0	0	0	0
Engineering, Other	2,056	1,721	335	1,276	1,085	191	117	106	11
Engineering & Related Technologies	**19,277**	**17,800**	**1,477**	**612**	**529**	**83**	**11**	**9**	**2**
Electronic Technology	5,145	4,822	323	24	20	4	0	0	0
Industrial Production Technology	4,629	4,216	413	176	158	18	6	5	1
Mechanical and Related Technologies	2,441	2,303	138	0	0	0	0	0	0
Technologies, Other	7,062	6,459	603	412	351	65	5	4	1
Foreign Languages	**10,184**	**2,791**	**7,393**	**1,746**	**517**	**1,229**	**441**	**184**	**257**
Germanic	1,416	549	867	249	97	152	77	37	40
Italic	6,881	1,537	5,344	1,042	256	786	227	71	156
Baltic-Slavic	577	232	345	110	50	60	22	9	13
Other Foreign Languages	1,310	473	837	345	144	231	115	67	48
Allied Health	**12,719**	**2,427**	**10,292**	**2,981**	**701**	**2,280**	**60**	**31**	**29**
Medical Technology	2,226	479	1,747	28	6	22	0	0	0
Mental Health/Human Services	753	122	631	1,117	284	833	29	19	10
Rehabilitative Services	6,317	1,009	5,308	1,276	247	1,029	14	3	11
Allied Health, Other	3,423	817	2,606	560	164	396	17	9	8
Health Sciences	**50,487**	**6,750**	**43,737**	**15,445**	**3,186**	**12,259**	**1,153**	**533**	**620**
Speech Pathology/Audiology	2,563	128	2,435	2,985	165	2,820	89	24	65
Health Services Administration	3,210	686	2,524	2,592	955	1,637	23	14	9
Medical Laboratory	1,259	276	983	79	17	62	4	2	2

TABLE 2-16 (continued)

BACHELOR'S, MASTER'S AND DOCTORAL DEGREES CONFERRED BY SEX AND FIELD, 1986-87 (continued)

DISCIPLINE DIVISION & SPECIALTY	BACHELOR'S DEGREES			MASTER'S DEGREES			DOCTOR'S DEGREES		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
ealth Sciences, cont.									
ursing	33,976	1,850	32,126	6,184	428	5,756	275	27	248
harmacy	5,022	2,213	2,809	265	149	116	199	141	58
ealth Sciences, Other	4,457	1,597	2,860	3,340	1,472	1,868	563	325	238
me Economics & Vocational Home Ec	**14,942**	**1,116**	**13,826**	**2,070**	**256**	**1,814**	**297**	**65**	**232**
w	**1,178**	**370**	**808**	**1,943**	**1,423**	**520**	**120**	**79**	**41**
tters	**37,133**	**12,684**	**24,449**	**6,123**	**2,140**	**3,983**	**1,181**	**515**	**666**
nglish, General	25,754	8,427	17,327	3,884	1,344	2,540	659	281	378
iterature, English	1,318	432	886	206	65	141	72	30	42
Speech, Debate & Forensic	6,817	2,645	4,172	576	177	399	79	40	39
inguistics	474	140	334	541	195	346	171	74	97
etters, Other	2,770	1,040	1,730	916	359	557	200	90	110
iberal/General Studies	**21,365**	**9,312**	**12,053**	**1,126**	**459**	**667**	**29**	**15**	**14**
ibrary & Archival Science	**139**	**20**	**119**	**3,815**	**796**	**3,019**	**57**	**18**	**39**
ife Sciences	**38,114**	**19,641**	**18,473**	**4,954**	**2,539**	**2,415**	**3,423**	**2,226**	**1,197**
Biology, General	27,458	14,045	13,413	2,022	1,050	972	537	339	198
Biochemistry & Biophysics	2,111	1,194	917	265	151	114	461	297	164
Botany	310	161	149	364	185	179	306	215	91
Cell and Molecular Biology	629	379	250	98	48	50	180	118	62
Microbiology	2,057	982	1,075	360	176	184	325	222	103
Zoology	3,032	1,643	1,389	833	486	347	900	597	303
Life Sciences, Other	2,827	1,389	1,429	1,376	628	748	1,020	653	367
athematics	**16,489**	**8,834**	**7,655**	**3,321**	**2,024**	**1,297**	**725**	**599**	**126**
ilitary Science & Technology	**383**	**357**	**26**	**83**	**81**	**2**	**0**	**0**	**0**
ulti-Interdisciplinary Studies	**16,402**	**7,597**	**8,805**	**3,041**	**1,764**	**1,277**	**276**	**174**	**102**
Parks & Recreation	**4,107**	**1,636**	**2,471**	**476**	**213**	**263**	**32**	**20**	**12**
Philosophy and Religion	**5,976**	**3,840**	**2,136**	**1,108**	**698**	**410**	**422**	**329**	**93**
Theology	**5,710**	**4,331**	**1,379**	**4,881**	**3,225**	**1,656**	**1,236**	**1,108**	**128**
Physical Sciences	**19,885**	**14,253**	**5,632**	**5,649**	**4,241**	**1,408**	**3,671**	**3,037**	**634**
Astronomy	100	84	16	60	44	16	52	43	9
Astrophysics	29	22	7	11	11	0	14	11	3
Atmospheric Sci & Meteorology	344	282	62	214	185	29	61	51	10
Chemistry	9,661	6,070	3,591	1,738	1,174	564	1,976	1,555	421
Geology	3,367	2,591	776	1,386	1,029	357	220	173	47
Geological Sciences, Other	298	223	75	217	159	58	60	50	10
Oceanography	150	129	21	112	78	34	69	58	11
Earth Science	523	404	119	126	84	42	50	41	9
Physics	4,330	3,635	695	1,563	1,320	243	1,086	983	103
Physical Science, Other	1,083	813	270	222	157	65	83	72	11
Science Technologies	**89**	**49**	**40**	**3**	**2**	**1**	**1**	**1**	**0**
Psychology	**42,868**	**13,332**	**29,536**	**8,204**	**2,856**	**5,348**	**3,123**	**1,458**	**1,665**
Protective Services	**12,930**	**7,974**	**4,956**	**1,019**	**719**	**300**	**18**	**15**	**3**
Public Affairs	**14,161**	**4,537**	**9,624**	**17,032**	**6,191**	**10,841**	**398**	**216**	**182**
Social Sciences	**96,186**	**53,879**	**42,306**	**10,397**	**6,294**	**4,103**	**2,916**	**2,026**	**890**
Anthropology	2,730	981	1,749	710	294	416	346	169	177
Archeology	67	21	46	36	11	25	17	7	10
Criminology	1,142	683	459	57	36	21	3	2	1
Economics	22,238	14,780	7,607	1,855	1,381	474	750	624	126
Geography	3,055	2,124	931	554	360	194	131	100	31
History	16,988	10,586	6,402	2,023	1,205	818	534	360	174
International Relations	3,648	1,657	1,991	1,415	872	543	61	53	8
Political Science & Govt.	26,834	15,999	10,835	1,618	1,111	507	435	316	119
Sociology	12,231	3,842	8,389	950	414	536	451	271	180
Social Sciences, Other	7,103	3,206	3,897	1,179	610	569	188	124	64
Visual and Performing Arts	**36,223**	**13,783**	**22,440**	**8,506**	**3,757**	**4,749**	**792**	**447**	**345**
Design	4,513	1,754	2,759	279	126	153	0	0	0
Dramatic Arts	4,563	1,869	2,694	1,108	564	544	84	55	29
Fine Arts	14,804	4,680	10,124	2,738	998	1,740	175	54	121
Music	6,924	3,256	3,668	3,454	1,669	1,785	518	329	189
Visual & Performing Arts, Other	5,419	2,224	3,195	927	400	527	15	9	6

Source: Degrees and Other Formal Awards Conferred, 1986–87 Survey, National Center for Education Statistics

TABLE 2-17 (continued)

BACHELOR'S DEGREES AWARDED BY FIELD, SEX & RACE/ETHNICITY 1986–87

					White			Black			Hispanic			Asian			Indian			Foreign		
FIELD	TOTAL	Women	Men	%W	Women	Men	%W	Wom	Men	%B	Wom	Men	%H	Wom	Men	%A	Wom	Men	%I	Wom	Men	%NR
ALL FIELDS	991260	510480	480780	51.5	435069	406751	84.9	34056	22499	5.7	14126	12864	2.7	15369	17249	3.3	2152	1819	0.4	9708	19598	3.0
Agriculture & Nat Resources	14991	4677	10314	31.2	4251	9406	91.1	117	182	2.0	79	152	1.5	122	161	1.9	20	38	0.4	88	375	3.1
Architecture & Env. Design	8949	3333	5616	37.2	2770	4501	81.2	79	198	3.1	105	233	3.8	157	208	4.1	11	15	0.3	211	461	7.5
Area & Ethnic Studies	3307	2058	1249	62.2	1652	997	80.1	116	85	6.1	88	58	4.4	137	77	6.5	20	9	0.9	45	23	2.1
Business & Management	241100	112180	128920	46.5	94027	111091	85.1	8635	6051	6.1	3146	3251	2.7	3129	2873	2.5	383	400	0.3	2860	5254	3.4
Communications	45393	27240	18153	60.0	23552	15941	87.0	2103	1125	7.1	609	402	2.2	563	356	2.0	74	58	0.3	339	271	1.3
Computer & Info Sciences	39590	13724	25866	34.7	9771	20480	76.4	1599	1329	7.4	462	615	5.0	1004	1542	6.4	53	63	0.3	835	1837	6.7
Education	87083	66324	20759	76.2	60166	18050	89.8	2905	1343	4.9	1705	518	2.6	780	312	1.3	328	124	0.5	440	407	1.0
Engineering	73839	11271	62568	15.3	8586	48977	78.0	718	1638	3.2	327	1680	2.7	1082	4613	7.7	30	184	0.3	528	5476	8.1
Engineering Technologies	19258	1477	17781	7.7	1094	14631	81.7	203	942	5.9	48	498	2.8	68	734	4.2	12	63	0.4	52	913	5.0
Foreign Languages	10197	7405	2792	72.6	6134	2287	82.6	234	87	3.1	599	209	7.9	201	140	3.3	14	10	0.2	223	59	2.8
Health Professions	63213	54036	9177	85.5	47620	7790	87.7	3341	481	6.0	1077	255	2.1	1240	337	2.5	228	46	0.4	530	268	1.3
Home Economics	14940	13825	1115	92.5	12163	909	87.5	781	98	5.9	214	18	1.6	377	46	2.8	101	18	0.8	189	26	1.4
Law	1177	808	369	68.6	740	334	91.2	38	14	4.4	14	11	2.1	13	9	1.9	1	1	0.2	2	0	0.2
Letters	37132	24452	12680	65.9	21956	11543	90.2	1124	465	4.3	494	242	2.0	534	246	2.1	59	40	0.3	285	144	1.2
Liberal/General Studies	21366	12051	9315	56.4	10073	7993	84.6	1002	618	7.6	588	305	4.2	196	160	1.7	83	50	0.6	109	189	1.4
Library/Archival Sciences	140	120	20	85.7	106	16	87.1	9	0	6.4	3	0	2.1	0	0	0.0	0	0	0.0	2	4	4.3
Life Sciences	38120	18464	19656	48.4	14886	16393	82.1	1192	740	5.1	602	657	3.3	1277	1343	6.9	68	79	0.4	439	444	2.3
Mathematics	16444	7652	8792	46.5	6340	7216	82.4	444	402	5.1	99	170	1.6	510	540	6.4	20	33	0.3	239	431	4.1
Military Sciencs	384	26	358	6.8	24	336	93.8	0	1	0.3	1	12	3.4	0	1	0.3	0	1	0.3	1	7	2.1
Multi/Interdiciplinary	16399	8801	7598	53.7	7303	6451	83.9	624	450	6.5	315	212	3.2	341	284	3.8	55	46	0.6	163	155	1.9
Parks & Recreation	4106	2470	1636	60.2	2286	1449	91.0	81	105	4.5	33	24	1.5	39	32	1.7	10	9	0.5	18	17	0.9
Philosophy & Religion	5984	2139	3845	35.7	1931	3393	89.0	73	160	3.9	41	101	2.4	57	106	2.7	3	8	0.2	34	77	1.9
Physical Sciences	20071	5699	14372	28.4	4654	12505	85.5	399	445	4.2	136	287	2.1	303	615	4.6	28	46	0.4	179	474	3.3
Protective Services	12930	4956	7974	38.3	3656	6521	78.7	1011	919	14.9	201	333	4.1	42	96	1.1	25	28	0.4	21	75	0.7
Psychology	42835	29507	13328	68.9	25474	11540	86.4	1852	683	5.9	942	459	3.3	771	417	2.8	121	65	0.4	347	164	1.2
Public Affairs	14178	9637	4541	68.0	7606	3683	79.6	1367	455	12.9	376	166	3.8	131	66	1.4	86	41	0.9	71	130	1.4
Social Sciences	96172	42302	53870	44.0	35166	46493	84.9	3266	2676	6.2	1319	1564	3.0	1494	1448	3.1	215	249	0.5	842	1440	2.4
Theology	5728	1398	4330	24.4	1286	3950	91.4	35	142	3.1	18	63	1.4	25	67	1.6	2	13	0.3	32	95	2.2
Visual & Performing Arts	36233	22448	13785	62.0	19796	11875	87.4	708	660	3.8	482	369	2.3	776	418	3.3	102	82	0.5	584	381	2.7

Note: This tabulation excludes 74 men and 5 women whose racial/ethnic group could not be imputed. Because of imputation methods, field of study totals by race/ethnicity may differ slightly from field of study totals by sex of student.

Source: Degrees and Other Formal Awards Conferred, 1984–85 Survey, Office for Civil Rights of the U.S. Department of Education

C2-16S&E, 4-29-88

TABLE 2-18

SCIENCE AND ENGINEERING DEGREES BY DEGREE LEVEL, FIELD, SEX & RACE/ETHNICITY 1984–85

					White			Black			Hispanic			Asian			Indian			Foreign		
FIELD	TOTAL(1)	Women	Men	%W	Women	Men	%W	Women	Men	%B	Women	Men	%H	Women	Men	%A	Women	Men	%I	Women	Men	%F
	BACHELORS																					
Agricultural Sciences	8,713	3,168	5,545	36.4	2,880	4,778	87.9	54	168	2.5	52	86	1.6	56	64	1.4	13	20	0.4	60	322	4.4
Computer & Info Sciences	38,117	14,427	23,690	37.8	10,872	18,720	77.6	1,084	1,003	5.5	334	466	2.1	857	1,113	5.2	60	74	0.4	649	1,408	5.4
Engineering	77,567	11,241	66,326	14.5	8,663	51,231	77.2	550	1,430	2.6	269	1,495	2.3	821	3,529	5.6	34	156	0.2	453	5,479	7.6
Life Sciences	39,504	18,869	20,635	47.8	14,578	16,234	78.0	1,196	974	5.5	572	667	3.1	881	973	4.7	68	85	0.4	286	484	1.9
Mathematics	15,287	7,036	8,251	46.0	5,555	6,336	77.8	392	365	5.0	108	139	1.6	396	483	5.7	22	34	0.4	276	456	4.8
Physical Sciences	24,876	7,707	17,169	31.0	6,410	14,537	84.2	366	435	3.2	112	313	1.7	248	482	2.9	30	60	0.4	194	559	3.0
SUBTOTAL NATURAL S&E	204,064	62,448	141,616	30.6	48,958	111,836	78.8	3,644	4,375	3.9	1,447	3,166	2.3	3,259	6,644	4.9	227	429	0.3	1,918	8,710	6.2
Psychology	40,356	27,422	12,934	68.0	22,158	10,452	80.8	1,815	700	6.2	881	405	3.2	533	262	2.0	107	83	0.5	323	279	1.5
Social Services	92,432	40,695	51,737	44.0	32,144	42,367	80.6	3,175	2,824	6.5	1,307	1,522	3.1	964	962	2.1	197	212	0.4	773	1,347	2.3
SUBTOTAL	132,788	68,117	64,671	51.3	54,302	52,819	80.7	4,990	3,524	6.4	2,188	1,927	3.1	1,497	1,224	2.0	304	295	0.5	1,096	1,626	2.0
TOTAL SCIENCE & ENG.	336,852	130,565	206,2[illegible]7	38.8	103,260	164,655	79.5	8,634	7,899	4.9	3,635	6,093	2.6	4,756	7,868	3.7	531	724	0.4	3,014	10,336	4.0
ALL FIELDS	991,477	505,068	486,409	50.9	408,356	390,444	80.6	33,168	22,305	5.6	13,807	12,196	2.6	11,293	12,952	2.4	2,062	1,864	0.4	8,545	19,105	2.8
	MASTERS																					
Agricultural Sciences	2,093	652	1,441	31.2	505	919	68.0	18	26	2.1	8	31	1.9	14	35	2.3	1	3	0.2	94	390	23.1
Computer & Info Sciences	7,101	2,037	5,064	28.7	1,210	2,958	58.7	70	105	2.5	28	66	1.3	199	390	8.3	12	28	0.6	431	1,252	23.7
Engineering	20,935	2,243	18,692	10.7	1,448	9,892	54.2	54	243	1.4	36	259	1.4	166	1,303	7.0	3	29	0.2	339	4,970	25.4
Life Sciences	5,091	2,420	2,662	47.7	1,889	2,055	77.5	81	64	2.8	56	42	2.0	84	81	3.2	6	5	0.2	181	279	9.0
Mathematics	2,888	1,011	1,877	35.0	691	1,134	63.2	18	32	1.7	18	25	1.5	55	106	5.6	3	3	0.2	182	470	22.6
Physical Sciences	5,802	1,352	4,450	23.3	962	3,010	68.5	24	53	1.3	19	79	1.7	58	140	3.4	1	14	0.3	198	852	18.1
SUBTOTAL NATURAL S&E	43,910	9,724	34,186	22.1	6,705	19,968	60.7	285	623	1.8	167	501	1.5	576	2,056	6.0	26	82	0.2	1,425	8,213	21.9
Psychology	8,481	5,417	3,064	63.9	4,282	2,432	79.2	266	138	4.8	140	101	2.8	73	42	1.4	19	11	0.4	167	107	3.2
Social Services	10,392	3,987	6,405	38.4	2,889	4,149	67.7	180	221	3.9	103	146	2.4	85	211	2.8	12	17	0.3	476	1,246	16.6
SUBTOTAL	18,873	9,404	9,469	49.8	7,171	6,581	72.9	446	359	4.3	243	247	2.6	158	253	2.2	31	28	0.3	643	1,353	10.6
TOTAL SCIENCE & ENG.	62,783	19,128	43,655	30.5	13,876	26,549	64.4	711	882	2.5	410	748	1.8	734	2,308	4.8	57	110	0.3	2,068	9,566	18.5
ALL FIELDS	287,213	143,497	143,716	50.0	112,788	100,209	74.2	8,301	4,796	4.6	3,621	2,801	2.2	2,733	4,471	2.5	548	487	0.4	6,920	18,831	8.9
	DOCTORATES																					
Agricultural Sciences	823	115	708	14	86	430	62.7	1	9	1.2	1	11	1.5	5	32	4.5	0	1	0.1	20	219	29.0
Computer & Info Sciences	248	25	223	10	17	124	56.9	0	3	1.2	0	2	0.8	1	12	5.2	0	1	0.4	4	64	27.4
Engineering	3,221	207	3,014	6	100	1,162	39.2	5	29	1.1	1	81	2.5	19	230	7.7	1	3	0.1	60	1,251	40.7
Life Sciences	3,436	1,125	2,311	33	853	1,807	77.4	20	32	1.5	28	37	1.9	47	79	3.7	2	2	0.1	107	259	10.7
Mathematics	699	109	590	16	69	291	5.0	0	7	1.0	6	15	3.0	5	30	5.0	0	0	0.0	24	219	34.8
Physical Sciences	3,394	554	2,840	16	379	1,927	67.9	7	20	0.8	5	31	1.1	41	118	4.7	1	2	0.1	88	563	19.2
SUBTOTAL NATURAL S&E	11,821	2,135	9,686	18	1,504	5,741	61.3	33	100	1.1	41	177	1.8	118	501	5.2	4	9	0.1	303	2,575	24.3
Psychology	2,925	1,428	1,497	49	1,161	1,213	81.2	55	45	3.4	24	22	1.6	22	21	1.5	1	2	0.1	33	56	3.0
Social Services	2,851	918	1,933	32	670	1,202	65.7	39	57	3.4	19	44	2.2	19	39	2.0	3	1	0.1	95	459	19.4
SUBTOTAL	5,776	2,346	3,430	41	1,831	2,415	73.5	94	102	3.4	43	66	1.9	41	60	1.7	4	3	0.1	128	515	11.1
TOTAL SCIENCE & ENG.	17,597	4,481	13,116	25	3,335	8,156	65.3	127	202	1.9	84	243	1.9	159	561	4.1	8	12	0.1	431	3,090	20.0
ALL FIELDS	32,972	11,258	21,714	34	8,560	14,328	69.4	552	513	3.2	225	393	1.9	277	747	3.1	44	41	0.3	836	4,211	15.3

Note: Table includes data from the Trust Territories and Puerto Rico

(1) Totals include those who did not designate racial/ethnic origin.

Source: Degrees and Other Formal Awards Conferred, 1986-87 Survey, National Center for Education Statistics

TABLE 2-17

DOCTORATE DEGREES AWARDED BY FIELD, SEX & RACE/ETHNICITY 1986-87

					White			Black			Hispanic			Asian			Indian			Foreign		
FIELD	TOTAL	Women	Men	%W	Wom	Men	%W	Wom	Men	%B	Wom	Men	%H	Wom	Men	%A	Wom	Men	%I	Wom	Men	%F
ALL FIELDS	34033	11974	22059	35.2	9622	14813	71.8	572	488	3.1	311	439	2.2	302	795	3.2	46	58	0.3	1121	5466	19.4
Agriculture & Nat Resourc	1048	177	871	16.9	124	526	62.0	5	13	1.7	3	12	1.4	4	28	3.1	0	2	0.2	41	290	31.6
Architecture & Env. Desig	92	26	66	28.3	17	28	48.9	3	4	7.6	0	0	0.0	0	1	1.1	0	0	0.0	6	33	42.4
Area & Ethnic Studies	132	59	73	44.7	45	54	75.0	5	2	5.3	0	2	1.5	0	1	0.8	0	1	0.8	9	13	16.7
Business & Management	1094	258	836	23.6	215	473	62.9	8	21	2.7	4	6	0.9	4	46	4.6	1	1	0.2	26	289	28.8
Communications	280	117	163	41.8	93	116	74.6	10	7	6.1	4	7	3.9	1	0	0.4	0	0	0.0	9	33	15.0
Computer & Info Sciences	374	52	322	13.9	41	178	58.6	1	1	0.5	1	5	1.6	4	16	5.3	0	1	0.3	5	121	33.7
Education	6909	3792	3117	54.9	3083	2412	79.5	291	177	6.8	120	87	3.0	45	59	1.5	24	25	0.7	229	357	8.5
Engineering	3807	261	3546	6.9	170	1502	43.9	3	26	0.8	3	65	1.8	18	240	6.8	0	3	0.1	67	1710	46.7
Engineering Technologies	11	2	9	18.2	2	3	45.5	0	1	9.1	0	0	0.0	0	0	0.0	0	0	0.0	0	5	45.5
Foreign Languages	441	257	184	58.3	183	117	68.0	9	7	3.6	31	11	9.5	2	2	0.9	0	0	0.0	32	47	17.9
Health Professions	1213	649	564	53.5	526	406	76.8	25	8	2.7	7	10	1.4	17	23	3.3	2	1	0.2	72	116	15.5
Home Economics	297	232	65	78.1	176	49	75.8	21	2	7.7	5	1	2.0	5	1	2.0	0	0	0.0	25	12	12.5
Law	120	41	79	34.2	29	42	59.2	2	1	2.5	7	12	15.8	0	0	0.0	0	0	0.0	3	24	22.5
Letters	1181	666	515	56.4	545	405	80.4	22	6	2.4	9	17	2.2	16	5	1.8	3	3	0.5	71	79	12.7
Liberal/General Studies	29	15	14	51.7	11	11	75.9	2	0	6.9	1	0	3.4	0	0	0.0	0	0	0.0	1	3	13.8
Library/Archival Sciences	57	38	19	66.7	30	13	75.4	1	0	1.8	0	0	0.0	0	2	3.5	0	1	1.8	7	3	17.5
Life Sciences	3417	1194	2223	34.9	921	1703	76.8	23	30	1.6	23	36	1.7	66	83	4.4	1	4	0.1	160	367	15.4
Mathematics	723	125	598	17.3	64	285	48.3	1	8	1.2	2	7	1.2	13	24	5.1	0	1	0.1	45	273	44.0
Multi/Interdiciplinary	276	102	174	37.0	88	127	77.9	1	1	0.7	3	5	2.9	2	2	1.4	1	0	0.4	7	39	16.7
Parks & Recreation	33	13	20	39.4	11	17	84.8	2	0	6.1	0	0	0.0	0	0	0.0	0	0	0.0	0	3	9.1
Philosophy & Religion	420	91	329	21.7	80	266	82.4	1	6	1.7	0	5	1.2	3	6	2.1	0	0	0.0	7	46	12.6
Physical Sciences	3671	633	3038	17.2	456	1985	66.5	4	22	0.7	17	43	1.6	37	129	4.5	0	3	0.1	119	856	26.6
Protective Services	19	3	16	15.8	1	14	78.9	0	0	0.0	0	0	0.0	1	2	15.8	0	0	0.0	1	0	5.3
Psychology	3056	1629	1427	53.3	1436	1289	89.2	62	35	3.2	48	23	2.3	29	22	1.7	10	6	0.5	44	52	3.1
Public Affairs	397	182	215	45.8	146	146	73.6	18	16	8.6	2	16	4.5	4	2	1.5	0	2	0.5	12	33	11.3
Social Sciences	2915	889	2026	30.5	723	1328	70.4	38	57	3.3	18	50	2.3	18	59	2.6	2	2	0.1	90	530	21.3
Theology	1230	127	1103	10.3	109	931	84.6	5	34	3.2	0	11	0.9	1	36	3.0	0	2	0.2	12	89	8.2
Visual & Performing Arts	791	344	447	43.5	297	387	86.5	9	3	1.5	3	8	1.4	12	6	2.3	2	0	0.3	21	43	8.1

Note: This tabulation excludes 40 men and 47 women whose racial/ethnic group could not be imputed. Because of imputation methods, field of study totals by race/ethnicity may differ slightly from field of study totals by sex of student.

Source: Degrees and Other Formal Awards Conferred, 1986–87 Survey, National Center for Education Statistics

TABLE 2-17 (continued)

MASTERS DEGREES AWARDED BY FIELD, SEX & RACE/ETHNICITY 1986–87

					White			Black			Hispanic			Asian			Indian			Foreign		
FIELD	TOTAL	Women	Men	%W	Women	Men	%W	Wom	Men	%B	Wom	Men	%H	Wom	Men	%A	Wom	Men	%I	Wom	Men	%F
ALL FIELDS	289341	148077	141264	51.2	123297	105573	79.1	8716	5151	4.8	3714	3330	2.4	3320	5238	3.0	587	517	0.4	8443	21455	10.3
Agriculture & Nat Resources	3521	1061	2460	30.1	856	1680	72.0	16	63	2.2	14	30	1.2	22	36	1.6	2	4	0.2	151	647	22.7
Architecture & Env. Design	3164	1078	2086	34.1	831	1419	71.1	29	48	2.4	25	68	2.9	35	57	2.9	1	7	0.3	157	487	20.4
Area & Ethnic Studies	853	396	457	46.4	275	310	68.6	29	10	4.6	23	30	6.2	13	25	4.5	1	4	0.6	55	78	15.6
Business & Management	67504	22285	45219	33.0	18077	35505	79.4	1173	1637	4.2	483	954	2.1	773	1531	3.4	56	112	0.3	1721	5480	10.7
Communications	3892	2303	1589	59.2	1839	1233	78.9	142	83	5.8	39	31	1.8	50	29	2.0	7	5	0.3	226	208	11.2
Computer & Info Sciences	8481	2496	5985	29.4	1578	3475	59.6	86	136	2.6	34	98	5.0	273	561	9.8	3	20	0.3	522	1695	26.1
Education	75473	55838	19635	74.0	48061	16431	85.5	4123	1127	7.0	1631	601	3.0	492	232	1.0	256	120	0.5	1275	1124	3.2
Engineering	22046	2767	19279	12.6	1944	11399	60.5	91	328	1.9	71	450	2.4	202	1513	7.8	6	33	0.2	453	5556	27.3
Engineering Technologies	612	83	529	13.6	62	343	66.2	7	23	4.9	2	6	1.3	3	39	6.9	0	25	4.1	9	93	16.7
Foreign Languages	1745	1229	516	70.4	828	351	67.6	20	9	1.7	120	42	9.3	28	8	2.1	1	3	0.2	232	103	19.2
Health Professions	18421	14536	3885	78.9	12676	3048	85.4	717	139	4.6	306	72	2.1	337	152	2.7	50	12	0.3	450	462	5.0
Home Economics	2069	1813	256	87.6	1525	206	83.7	78	12	4.3	22	3	1.2	44	5	2.4	14	3	0.8	130	27	7.6
Law	1944	521	1423	26.8	291	809	56.6	18	26	2.3	20	30	2.6	25	53	4.0	1	3	0.2	166	502	34.4
Letters	6125	3983	2142	65.0	3375	1774	84.1	103	38	2.3	52	37	1.5	87	43	2.1	11	9	0.3	355	241	9.7
Liberal/General Studies	1129	670	459	59.3	610	428	91.9	16	3	1.7	9	1	0.9	7	5	1.1	7	1	0.7	21	21	3.7
Library/Archival Sciences	3814	3018	796	79.1	2639	679	87.0	121	25	3.8	34	14	1.3	72	21	2.4	8	1	0.2	144	56	5.2
Life Sciences	4950	2412	2538	48.7	1906	2038	79.7	91	84	3.5	46	40	1.7	109	89	4.0	7	4	0.2	253	283	10.8
Mathematics	3319	1297	2022	39.1	866	1247	63.7	29	47	2.3	16	39	1.7	77	116	5.8	2	1	0.1	307	572	26.5
Military Science	119	1	118	0.8	0	101	84.9	1	7	6.7	0	5	4.2	0	0	0.0	0	0	0.0	0	5	4.2
Multi/Interdiciplinary	3035	1273	1762	41.9	1094	1491	85.2	54	60	3.8	29	26	1.8	32	34	2.2	10	21	1.0	54	130	6.1
Parks & Recreation	475	263	212	55.4	231	183	87.2	18	7	5.3	1	2	0.6	7	7	2.9	0	1	0.2	6	12	3.8
Philosophy & Religion	1109	411	698	37.1	353	541	80.6	11	30	3.7	9	20	2.6	4	25	2.6	1	2	0.3	33	80	10.2
Physical Sciences	5630	1410	4220	25.0	1039	3023	72.1	36	48	1.5	31	85	2.1	67	174	4.3	2	7	0.2	235	883	19.9
Protective Services	1019	300	719	29.4	222	586	79.3	60	80	13.7	5	10	1.5	5	5	1.0	1	7	0.8	7	31	3.7
Psychology	8124	5296	2828	65.2	4622	2471	87.3	275	123	4.9	152	91	3.0	85	35	1.5	24	13	0.5	138	95	2.9
Public Affairs	17029	10840	6189	63.7	8949	4696	80.1	1036	517	9.1	347	263	3.6	167	146	1.8	83	52	0.8	258	515	4.5
Social Sciences	10395	4102	6293	39.5	3125	4316	71.6	190	226	4.0	91	154	2.4	98	152	2.4	6	17	0.2	592	1428	19.4
Theology	4841	1648	3193	34.0	1450	2658	84.9	35	86	2.5	25	63	1.8	42	70	2.3	2	6	0.2	94	310	8.3
Visual & Performing Arts	8503	4747	3756	55.8	3973	3132	83.6	111	129	2.8	77	65	1.7	164	75	2.8	23	24	0.6	399	331	8.6

Note: This tabulation excludes 99 men and 117 women whose racial/ethnic group could not be imputed. Because of imputation methods, field of study totals by race/ethnicity may differ slightly from field of study totals by sex of student.

Source: Degrees and Other Formal Awards Conferred, 1986–87 Survey, National Center for Education Statistics

TABLE 2-19

SCIENCE AND ENGINEERING DEGREES BY DEGREE LEVEL, FIELD, SEX & RACE/ETHNICITY, 1986–87

					White			Black			Hispanic			Asian			Indian			Foreign		
FIELD	TOTAL(1)	Women	Men	%W	Women	Men	%W	Women	Men	%B	Women	Men	%H	Women	Men	%A	Women	Men	%I	Women	Men	%F
								BACHELORS														
Agriculture & Nat Resources	14,991	4,677	10,314	31.2	4,251	9,406	91.1	117	182	2.0	79	152	1.5	122	161	1.9	20	38	0.4	88	375	3.1
Computer & Info Sciences	39,590	13,724	25,866	34.7	9,771	20,480	76.4	1,599	1,329	7.4	462	615	2.7	1,004	1,542	6.4	53	63	0.3	835	1,337	6.7
Engineering	73,839	11,271	62,568	15.3	8,586	48,977	78.0	718	1,638	3.2	327	1,680	2.7	1,082	4,613	7.7	30	184	0.3	528	5,476	8.1
Life Sciences	38,120	18,464	19,656	48.4	14,886	16,393	82.1	1,192	740	5.1	602	657	3.3	1,277	1,343	6.9	68	79	0.4	439	444	2.3
Mathematics	16,444	7,652	8,792	46.5	6,340	7,216	82.4	444	402	5.1	99	170	1.6	510	540	6.4	20	33	0.3	239	431	4.1
Physical Sciences	20,071	5,699	14,372	28.4	4,654	12,505	85.5	399	445	4.2	136	287	2.1	303	615	4.6	28	46	0.4	179	474	3.3
SUBTOTAL NATURAL S&E	203,055	61,487	141,568	30.3	48,488	114,977	80.5	4,469	4,736	4.5	1,705	3,561	2.6	4,298	8,814	6.5	219	443	0.3	2,308	9,037	5.6
Psychology	42,835	29,507	13,328	68.9	25,474	11,540	86.4	1,852	683	5.9	942	459	3.3	771	417	2.8	121	65	0.4	347	164	1.2
Social Services	96,172	42,302	53,870	44.0	35,166	46,493	84.9	3,266	2,676	6.2	1,319	1,564	3.0	1,494	1,448	3.1	215	249	0.5	842	1,440	2.4
SUBTOTAL	139,007	71,809	67,198	51.7	60,640	58,033	85.4	5,118	3,359	6.1	2,261	2,023	3.1	2,265	1,865	3.0	336	314	0.5	1,189	1,604	2.0
TOTAL S&E	342,062	133,296	208,766	39.0	109,128	173,010	82.5	9,587	8,095	5.2	3,966	5,584	2.8	6,563	10,679	5.0	555	757	0.4	3,497	10,641	4.1
ALL FIELDS	991,260	510,480	480,780	51.5	435,069	406,751	84.9	34,056	22,499	5.7	14,126	12,864	2.7	15,369	17,249	3.3	2,152	1,819	0.4	9,708	19,598	3.0
								MASTERS														
Agriculture & Nat Resources	3,521	1,061	2,460	30.1	856	1,680	72.0	16	63	2.2	14	30	1.2	22	36	1.6	2	4	0.2	151	647	22.7
Computer & Info Sciences	8,481	2,496	5,985	29.4	1,578	3,475	59.6	86	136	2.6	34	98	1.6	273	561	9.8	3	20	0.3	522	1,695	26.1
Engineering	22,046	2,767	19,279	12.6	1,944	11,399	60.5	91	328	1.9	71	450	2.4	202	1,513	7.8	6	33	0.2	453	5,556	27.3
Life Sciences	4,950	2,412	2,538	48.7	1,906	2,038	79.7	91	84	3.5	46	40	1.7	109	89	4.0	7	4	0.2	253	283	10.8
Mathematics	3,319	1,297	2,022	39.1	866	1,247	63.7	29	47	2.3	16	39	1.7	77	116	5.8	2	1	0.1	307	572	26.5
Physical Sciences	5,630	1,410	4,220	25.0	1,039	3,023	72.1	36	48	1.5	31	85	2.1	67	174	4.3	2	7	0.2	236	883	19.9
SUBTOTAL NATURAL S&E	47,947	11,443	36,504	23.9	8,189	22,862	64.8	349	706	2.2	212	742	2.0	750	2,489	6.8	22	69	0.2	1,921	9,636	24.1
Psychology	8,124	5,296	2,828	65.2	4,622	2,471	87.3	275	123	4.9	152	91	3.0	85	35	1.5	24	13	0.5	136	95	2.9
Social Services	10,395	4,102	6,293	39.5	3,125	4,316	71.6	190	226	4.0	91	154	2.4	98	152	2.4	6	17	0.2	592	1,428	19.4
SUBTOTAL	18,519	9,398	9,121	50.7	7,747	6,787	78.5	465	349	4.4	243	245	2.6	183	187	2.0	30	30	0.3	730	1,523	12.2
TOTAL S&E	66,466	20,841	45,625	31.4	15,936	29,649	68.6	814	1,055	2.8	455	987	2.2	933	2,676	5.4	52	99	0.2	2,651	11,159	20.6
ALL FIELDS	289,341	148,077	141,264	51.2	123,297	105,573	79.1	8,716	5,151	4.8	3,714	3,330	2.4	3,320	5,238	3.0	587	517	0.4	8,443	21,455	10.3
								DOCTORATES														
Agriculture & Nat Resources	1,048	177	871	16.9	124	526	62.0	5	13	1.7	3	12	1.4	4	28	3.1	0	2	0.2	41	290	31.6
Computer & Info Sciences	374	52	322	13.9	41	178	58.6	1	1	0.5	1	5	1.6	4	16	5.3	0	1	0.3	5	121	33.7
Engineering	3,807	261	3,546	6.9	170	1,502	43.9	3	26	0.8	3	65	1.8	18	240	6.8	0	3	0.1	67	1,710	46.7
Life Sciences	3,417	1,194	2,223	34.9	921	1,703	76.8	[illegible]	30	1.6	23	36	1.7	66	83	4.4	1	4	0.1	160	367	15.4
Mathematics	723	125	598	17.3	64	285	48.3	1	8	1.2	2	7	1.2	13	24	5.1	0	1	0.1	45	273	44.0
Physical Sciences	3,671	633	3,038	17.2	456	1,965	66.5	4	22	0.7	17	43	1.6	37	129	4.5	0	3	0.1	119	856	26.6
SUBTOTAL NATURAL S&E	13,040	2,442	10,598	18.7	1,776	6,179	61.0	37	100	1.1	49	168	1.7	142	520	5.1	1	14	0.1	437	3,617	31.1
Psychology	3,056	1,629	1,427	53.3	1,436	1,289	89.2	62	35	3.2	48	23	2.3	29	22	1.7	10	6	0.5	44	52	3.1
Social Services	2,915	889	2,026	30.5	723	1,328	70.4	38	57	3.3	18	50	2.3	18	59	2.6	2	2	0.1	90	530	21.3
SUBTOTAL	5,971	2,518	3,453	42.2	2,159	2,617	80.0	100	92	3.2	66	73	2.3	47	81	2.1	12	8	0.3	134	582	12.0
TOTAL S&E	19,011	4,960	14,051	26.1	3,935	8,796	67.0	137	192	1.7	115	241	1.9	189	601	4.2	13	22	0.2	571	4,199	25.1
ALL FIELDS	34,033	11,974	22,059	35.2	9,622	14,813	71.8	572	488	3.1	311	439	2.2	302	795	3.2	46	58	0.3	1,121	5,466	19.4

Note: Table includes data from the Trust Territories and Puerto Rico.

(1) Totals include those who did not designate racial/ethnic origin.

Source: Degrees and Other Formal Awards Conferred, 1986–87 Survey, National Center for Education Statistics and 1984–85 Survey, Office for Civil Rights

D2-16CAL, 8-17-89

TABLE 2-20

SCIENCE AND ENGINEERING BACHELOR DEGREES BY FIELD, SEX & RACE/ETHNICITY, 1986–87 AND 1984–85

						White			Black			Hispanic			Indian			UnderRep Minorities			Asian			Total Minorities			Foreign		
FIELD	TOTAL(1)	%ALL	Women	Men	%W	Wom	Men	%W	Wom	Men	%B	Wom	Men	%H	Wom	Men	%I	Wom	Men	%B	Wom	Men	%A	Wom	Men	%M	Wom	Men	%F
1986–87																													
Agriculture & Nat Resources	14,991	1.5	4,677	10,314	31.2	4,251	9,406	91.1	117	182	2.0	79	152	1.5	20	38	0.4	216	372	3.9	122	161	1.9	338	533	5.8	88	375	3.1
Computer & Info Sciences	39,590	4.0	13,724	25,866	34.7	9,771	20,480	76.4	1,599	1,329	7.4	462	615	2.7	53	63	0.3	2,114	2,007	10.4	1,004	1,542	6.4	3,118	3,549	16.8	835	1,837	6.7
Engineering	73,839	7.4	11,271	62,568	15.3	8,586	48,977	76.0	718	1,638	3.2	327	1,680	2.7	30	184	0.3	1,075	3,502	6.2	1,082	4,613	7.7	2,157	8,115	13.9	528	5,476	8.1
Life Sciences	38,120	3.8	18,464	19,656	48.4	14,886	16,393	82.1	1,192	740	5.1	602	657	3.3	68	79	0.4	1,862	1,476	8.8	1,277	1,343	6.9	3,139	2,819	15.6	439	444	2.3
Mathematics	16,444	1.7	7,652	8,792	46.5	6,340	7,216	82.4	444	402	5.1	99	170	1.6	20	33	0.3	563	605	7.1	510	540	6.4	1,073	1,145	13.5	239	431	4.1
Physical Sciences	20,071	2.0	5,699	14,372	28.4	4,654	12,505	85.5	399	445	4.2	136	287	2.1	28	46	0.4	563	778	6.7	303	615	4.6	866	1,393	11.3	179	474	3.3
SUBTOTAL NATURAL S&E	203,055	20.5	61,487	141,568	30.3	48,488	114,977	80.5	4,469	4,736	4.5	1,705	3,561	2.6	219	443	0.3	6,393	8,740	7.5	4,298	8,814	6.5	10,691	17,554	13.9	2,308	9,037	5.6
Psychology	42,835	4.3	29,507	13,328	68.9	25,474	11,540	86.4	1,852	683	5.9	942	459	3.3	121	65	0.4	2,915	1,207	9.6	771	417	2.8	3,686	1,624	12.4	347	164	1.2
Social Services	96,172	9.7	42,302	53,870	44.0	35,166	46,493	84.9	3,266	2,676	6.2	1,319	1,564	3.0	215	249	0.5	4,800	4,489	9.7	1,494	1,448	3.1	6,294	5,937	12.7	842	1,440	2.4
SUBTOTAL	139,007	14.0	71,809	67,198	51.7	60,640	58,033	85.4	5,118	3,359	6.1	2,261	2,023	3.1	336	314	0.5	7,715	5,696	9.6	2,265	1,865	3.0	9,980	7,561	12.6	1,189	1,604	2.0
TOTAL S&E	342,062	34.5	133,296	208,766	39.0	109,128	173,010	82.5	9,587	8,095	5.2	3,966	5,584	2.8	555	757	0.4	14,108	14,436	8.3	6,563	10,679	5.0	20,671	25,115	13.4	3,497	10,641	4.1
ALL FIELDS	991,260	100	510,480	480,780	51.5	435,069	406,751	84.9	34,056	22,499	5.7	14,126	12,864	2.7	2,152	1,819	0.4	50,334	37,182	8.8	15,369	17,249	3.3	65,703	54,431	12.1	9,708	19,598	3.0
1984–85																													
Agriculture & Nat Resources	12,328	1.2	4,245	8,083	34.4	3,877	7,163	89.6	61	188	2.0	63	114	1.4	18	35	0.4	142	337	3.9	78	84	1.3	220	421	5.2	69	352	3.4
Computer & Info Sciences	38,117	3.8	14,427	23,690	37.8	10,872	18,720	77.6	1,084	1,003	5.5	334	466	2.1	60	74	0.4	1,478	1,543	7.9	857	1,113	5.2	2,335	2,656	13.1	649	1,408	5.4
Engineering	77,567	7.8	11,241	66,326	14.5	8,663	51,231	77.2	550	1,430	2.6	269	1,495	2.3	34	156	0.2	853	3,081	5.1	821	3,529	5.6	1,674	6,610	10.7	453	5,479	7.6
Life Sciences	39,504	4.0	18,869	20,635	47.8	14,578	16,234	78.0	1,198	974	5.5	572	667	3.1	68	85	0.4	1,838	1,726	9.0	881	973	4.7	2,719	2,699	13.7	286	484	1.9
Mathematics	15,287	1.5	7,036	8,251	46.0	5,555	6,336	77.8	392	365	5.0	108	139	1.6	22	34	0.4	522	538	6.9	396	483	5.7	918	1,021	12.7	276	458	4.8
Physical Sciences	24,876	2.5	7,707	17,169	31.0	6,410	14,537	84.2	366	435	3.2	112	313	1.7	30	60	0.4	508	808	5.3	248	482	2.9	756	1,290	8.2	194	559	3.0
SUBTOTAL NATURAL S&E	207,679	20.9	63,525	144,154	30.6	49,955	114,221	79.1	3,651	4,395	3.9	1,458	3,194	2.2	232	444	0.3	5,341	8,033	6.4	3,281	6,664	4.8	8,622	14,697	11.2	1,927	8,740	5.1
Psychology	40,356	4.1	27,422	12,934	68.0	22,158	10,452	80.8	1,815	700	6.2	881	405	3.2	107	83	0.5	2,803	1,188	9.9	533	262	2.0	3,336	1,450	11.9	323	279	1.5
Social Services	92,432	9.3	40,695	51,737	44.0	32,144	42,367	80.6	3,175	2,824	6.5	1,307	1,522	3.1	197	212	0.4	4,679	4,558	10.0	964	962	2.1	5,643	5,520	12.1	773	1,347	2.3
SUBTOTAL	132,788	13.4	68,117	64,671	51.3	54,302	52,819	80.7	4,990	3,524	6.4	2,188	1,927	3.1	304	295	0.5	7,482	5,746	10.0	1,497	1,224	2.0	8,979	6,970	12.0	1,096	1,626	2.0
TOTAL SCIENCE & ENG.	340,467	34.3	131,642	208,825	38.7	104,257	167,040	79.7	8,641	7,919	4.9	3,646	5,121	2.6	536	739	0.4	12,823	13,779	7.8	4,778	7,888	3.7	17,601	21,667	11.5	3,023	10,366	3.9
ALL FIELDS	991,477	100	505,068	486,409	50.9	408,356	390,444	80.6	33,168	22,305	5.6	13,807	12,196	2.6	2,062	1,864	0.4	49,037	36,365	8.6	11,293	12,952	2.4	60,330	49,317	11.1	8,545	19,105	2.8
		%Change										Gain/(Loss) and Percentage Change																	
Agriculture & Nat Resources	2,663	21.6	432	2,231	10.2	374	2,243	21.2	56	(6)	0.4	16	38	0.4	2	3	0.0	74	35	0.9	44	77	1.0	118	112	1.9	19	23	0.3
Computer & Info Sciences	1,473	3.9	(703)	2,176	-4.9	(1,101)	1,760	1.7	515	326	2.2	128	149	0.7	(7)	(11)	0.0	636	464	2.9	147	429	1.5	783	893	4.4	186	429	1.6
Engineering	(3,728)	-4.8	30	(3,758)	0.3	(77)	(2,254)	-3.0	168	208	0.5	58	185	0.3	(4)	28	0.0	222	421	0.8	261	1,084	1.7	483	1,505	2.6	75	(3)	0.1
Life Sciences	(1,384)	-3.5	(405)	(979)	-2.1	308	159	1.2	(6)	(234)	-0.6	30	(10)	0.1	0	(6)	0.0	24	(250)	-0.6	396	370	1.9	420	120	1.4	153	(40)	0.3
Mathematics	1,157	7.6	616	541	8.8	785	880	10.9	52	37	0.6	(9)	31	0.1	(2)	(1)	0.0	41	67	0.7	114	57	1.1	155	124	1.8	(37)	(27)	-0.4
Physical Sciences	(4,805)	-19.3	(2,[illegible])	(2,797)	-26.1	(1,756)	(2,032)	-15.2	33	10	0.2	24	(26)	0.0	(2)	(14)	-0.1	55	(30)	0.1	55	133	0.8	110	103	0.9	(15)	(85)	-0.4
SUBTOTAL NATURAL S&E	(4,624)	-2.2	(2,038)	(2,586)	-3.2	(1,467)	756	-0.3	818	341	0.6	247	367	0.3	(13)	(1)	0.0	1,052	707	0.8	1,017	2,150	1.5	2,069	2,857	2.4	381	297	0.3
Psychology	2,479	6.1	2,085	394	7.6	3,316	1,088	10.9	37	(17)	0.0	61	54	0.3	14	(18)	0.0	112	19	0.3	238	155	1.0	350	174	1.3	24	(115)	-0.2
Social Services	3,740	4.0	1,607	2,133	3.9	3,022	4,126	7.7	91	(148)	-0.1	12	42	0.1	18	37	0.1	121	(69)	0.1	530	486	1.1	651	417	1.2	69	93	0.2
SUBTOTAL	6,219	4.7	3,692	2,527	5.4	6,338	5,214	8.7	128	(165)	0.0	73	96	0.1	32	19	0.0	233	(50)	0.1	768	641	1.1	1,001	591	1.2	93	(22)	0.1
TOTAL SCIENCE & ENG.	1,595	0.5	1,654	(59)	1.3	4,871	5,970	3.2	946	176	0.3	320	463	0.2	19	18	0.0	1,285	657	0.6	1,785	2,791	1.3	3,070	3,448	1.9	474	275	0.2
ALL FIELDS	(217)	0.0	5,412	(5,629)	1.1	26,713	16,307	4.3	888	194	0.1	319	668	0.1	90	(45)	0.0	1,297	817	0.2	4,076	4,297	0.8	5,373	5,114	1.1	1,163	493	0.2

(1) Totals include those who did not designate racial/ethnic origin.

Source: Degrees and Other Formal Awards Conferred, 1984-85 Survey, Office of Civil rights and 1986-87 Survey, National Center for Education Statistics

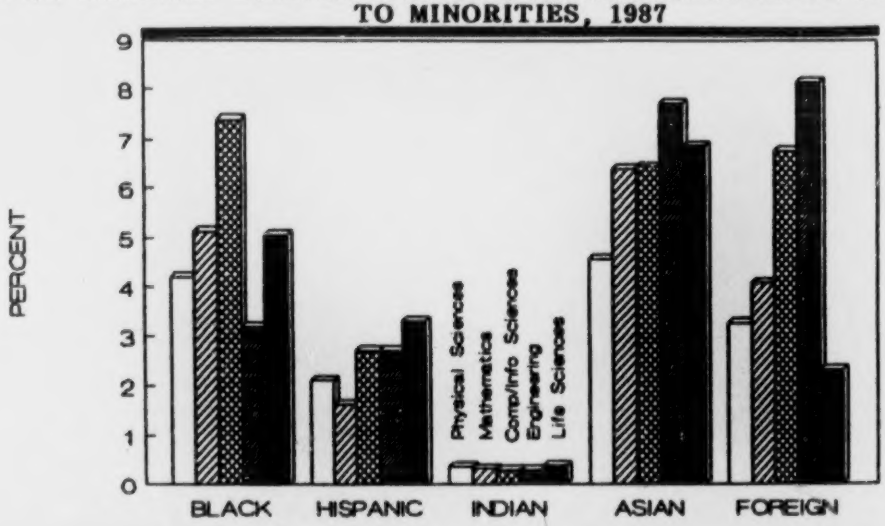
TABLE 2-21

PERCENT WOMEN AMONG S/E BACHELORS GRADUATES BY RACE/ETHNICITY, 1985 & 1987

	All Women		White		Black		Hispanic		Indian		UnderRep Min		Asian		All Min		Foreign	
FIELD	'85	'87	'85	'87	'85	'87	'85	'87	'85	'87	'85	'87	'85	'87	'85	'87	'85	'87
Agriculture & Nat Resources	34.4	31.2	35.1	31.1	24.5	39.1	35.6	34.2	34.0	34.5	29.6	36.7	48.1	43.1	34.3	38.8	16.4	19.0
Computer & Info Sciences	37.8	34.7	36.7	32.3	51.9	54.6	41.8	42.9	44.8	45.7	48.9	51.3	43.5	39.4	46.8	46.8	31.6	31.3
Engineering	14.5	15.3	14.5	14.9	27.8	30.5	15.2	16.3	17.9	14.0	21.7	23.5	18.9	19.0	20.2	21.0	7.6	8.8
Life Sciences	47.8	48.4	47.3	47.6	55.2	61.7	46.2	47.8	44.4	46.3	51.6	55.8	47.5	48.7	50.2	52.7	37.1	49.7
Mathematics	46.0	46.5	46.7	46.8	51.8	52.5	43.7	36.8	39.3	37.7	49.2	48.2	45.1	48.6	47.3	48.4	37.6	35.7
Physical Sciences	31.0	28.4	30.6	27.1	45.7	47.3	26.4	32.2	33.3	37.8	38.6	42.0	34.0	33.0	37.0	38.3	25.8	27.4
SUBTOTAL NATURAL S&E	30.6	30.3	30.4	29.7	45.4	48.5	31.3	32.4	34.3	33.1	39.9	42.2	33.0	32.8	37.0	37.9	18.1	20.3
Psychology	68.0	68.9	67.9	68.8	72.2	73.1	68.5	67.2	56.3	65.1	70.2	70.7	67.0	64.9	69.7	69.4	53.7	67.9
Social Services	44.0	44.0	43.1	43.1	52.9	55.0	46.2	45.8	48.2	46.3	50.7	51.7	50.1	50.8	50.6	51.5	36.5	36.9
SUBTOTAL	51.3	51.7	50.7	51.1	58.6	60.4	53.2	52.8	50.8	51.7	56.6	57.5	55.0	54.8	56.3	56.9	40.3	42.6
TOTAL S&E	38.7	39.0	38.4	38.7	52.2	54.2	41.6	41.5	42.0	42.3	48.2	49.4	37.7	38.1	44.8	45.1	22.6	24.7
ALL FIELDS	50.9	51.5	51.1	51.7	59.8	60.2	53.1	52.3	52.5	54.2	57.4	57.5	46.6	47.1	55.0	54.7	30.9	33.1

CHART 2-5

PERCENT OF NATURAL SCIENCE AND ENGINEERING BACHELOR'S DEGREES AWARDED TO MINORITIES, 1987



Source: NCES

Graph by CPST

Source: The **Chronicle of Higher Education Almanac,** September 6, 1989

TABLE 2-22

DEGREES AWARDED AND MINORITY STUDENT ENROLLMENT BY STATE AND TYPE OF INSTITUTION, 1986-87

	Degrees awarded, 1986-87					Proportion of all minority students in 1986 who enrolled at each type of institution			
	Associate	Bachelor's	Master's	Doctorate	Professional	Public	Private	4-year	2-year
Alabama	6,183	15,981	3,946	279	797	80.7%	19.3%	52.7%	47.3%
Alaska	742	898	320	7	0	92.7%	7.3%	37.8%	62.2%
Arizona	5,911	12,287	4,819	506	352	93.5%	6.5%	30.0%	70.0%
Arkansas	2,263	7,036	1,883	112	319	86.5%	13.5%	78.3%	21.7%
California	46,483	90.005	31,297	4.147	8,097	92.5%	7.5%	34.7%	65.3%
Colorado	5,756	15,218	4,088	636	853	91.1%	8.9%	48.0%	52.0%
Connecticut	4,842	13,499	5,755	533	947	66.8%	33.2%	61.3%	38.7%
Delaware	1,153	3,246	586	96	245	56.5%	43.5%	72.2%	27.8%
District of Columbia	369	6,711	5,062	475	2,681	38.8%	61.2%	100.0%	0.0%
Florida	29,524	31,430	9,044	1,109	2,105	78.8%	21.2%	46.1%	53.9%
Georgia	6,732	19,103	5,652	654	1,990	63.6%	36.4%	78.4%	21.6%
Hawaii	2,350	3,701	925	145	137	91.0%	9.0%	56.7%	43.3%
Idaho	2,297	3,035	722	47	68	87.0%	13.0%	75.9%	24.1%
Illinois	23,913	47,387	17,075	2,062	4,429	81.6%	18.4%	37.3%	62.7%
Indiana	8,681	26,623	6,943	967	1,518	80.9%	19.1%	78.1%	21.9%
Iowa	7,236	16,450	2,775	608	1,315	71.4%	28.6%	71.5%	28.5%
Kansas	5,374	11,714	2,986	389	655	86.8%	13.2%	58.1%	41.9%
Kentucky	5,196	11,708	3,261	281	1,144	82.6%	17.4%	69.6%	30.4%
Louisiana	2,603	16,221	3,972	301	1,392	85.1%	14.9%	87.9%	12.1%
Maine	2,030	5,122	503	25	163	25.3%	74.7%	95.8%	4.2%
Maryland	7,129	16,760	5,334	690	968	91.3%	8.7%	59.0%	41.0%
Massachusetts	13,617	41,555	15,077	1,908	3,732	40.5%	59.5%	71.3%	28.7%
Michigan	21,834	38,181	11,534	1,321	2,504	81.9%	18.1%	54.7%	45.3%
Minnesota	7,654	20,667	3,607	529	1,529	80.4%	19.6%	73.3%	26.7%
Mississippi	4,332	9,173	2,037	272	461	88.3%	11.7%	58.6%	41.4%
Missouri	6,545	23,541	7,670	545	2,287	67.9%	32.1%	65.6%	34.4%
Montana	734	4,140	765	49	74	57.9%	42.1%	53.9%	46.1%
Nebraska	2,918	8,410	1,609	215	752	77.2%	22.8%	63.0%	37.0%
Nevada	884	1,929	419	32	42	99.8%	0.2%	41.2%	58.8%
New Hampshire	2,372	6,770	1,649	78	173	24.3%	75.7%	92.3%	7.7%
New Jersey	9,534	23,328	6,454	670	1,753	84.8%	15.2%	59.0%	41.0%
New Mexico	1,766	4,548	1,732	206	170	97.6%	2.4%	52.0%	48.0%
New York	47,956	86,651	32,890	3,366	6,962	66.9%	33.1%	70.6%	29.4%
North Carolina	10,659	24,919	5,678	788	1,620	83.0%	17.0%	57.8%	42.2%
North Dakota	1,980	4,209	587	76	117	87.6%	12.4%	48.4%	51.6%
Ohio	17,850	43,983	12,185	1,612	3,341	74.2%	25.8%	66.5%	33.5%
Oklahoma	5,338	13,545	3,935	342	999	88.7%	11.3%	62.2%	37.8%
Oregon	4,673	10,922	2,784	349	899	87.2%	12.8%	55.8%	44.2%
Pennsylvania	18,586	57,158	13,501	1,802	3,730	64.2%	35.8%	63.6%	36.4%
Rhode Island	3,822	7,737	1,720	212	78	49.2%	50.8%	75.6%	24.4%
South Carolina	4,766	12,559	3,269	266	738	75.5%	24.5%	60.2%	39.8%
South Dakota	793	3,738	719	65	140	76.9%	23.1%	96.3%	3.7%
Tennessee	5,568	17,328	4,000	576	1,344	72.3%	27.7%	66.7%	33.3%
Texas	20,816	57,438	17,174	2,079	4,456	92.2%	7.8%	53.4%	46.6%
Utah	3,151	11,085	2,403	361	365	84.7%	15.3%	61.1%	38.9%
Vermont	1,128	4,080	839	41	193	47.2%	52.8%	91.6%	8.4%
Virginia	7,037	24,010	5,589	693	1,643	82.3%	17.7%	62.2%	37.8%
Washington	12,278	17,767	4,066	599	901	90.4%	9.6%	41.5%	58.5%
West Virginia	2,563	7,518	1,751	110	329	86.3%	13.7%	87.6%	12.4%
Wisconsin	8,723	25.322	5.393	795	1.030	82.6%	17.4%	55.2%	44.8%
Wyoming	1,309	1,625	345	68	59	97.2%	2.8%	29.2%	70.8%
U.S. total	**437,137**	**991,339**	**289,557**	**34,120**	**72,750**	**82.3%**	**17.7%**	**53.3%**	**46.7%**

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, 1986 and Earned Degrees, 1982-87, Center for Education Statistics

TABLE 2-23

GRADUATE DEGREE ATTAINMENT RATES IN SCIENCE AND ENGINEERING, BY SEX, 1972-87

Bachelor's		Master's		Attainment	Bachelor's		Ph.D.s		Attainment
Year	Number	Year	Number	Rate	Year	Number	Year	Number	Rate
				Men					
1970	195,244	1972	44,010	22.5	1965	128,723	1972	16,906	13.1
1971	198,180	1973	44,474	22.4	1966	133,989	1973	16,551	12.4
1972	203,557	1974	43,630	21.4	1967	143,847	1974	15,706	10.7
1973	211,552	1975	42,847	20.3	1968	158,711	1975	15,522	9.8
1974	213,269	1976	42,675	20.0	1969	181,323	1976	14,883	8.2
1975	201,578	1977	43,577	21.6	1970	195,244	1977	14,311	7.3
1976	196,577	1978	42,547	21.6	1971	198,180	1978	13,735	6.9
1977	191,090	1979	40,416	21.2	1972	203,557	1979	13,662	6.7
1978	188,107	1980	40,010	21.3	1973	211,552	1980	13,398	6.3
1979	186,333	1981	38,835	20.8	1974	213,269	1981	13,610	6.4
1980	186,009	1982	40,020	21.5	1975	201,578	1982	13,483	6.7
1981	184,421	1983	40,857	22.1	1976	196,577	1983	13,464	6.8
1982	186,995	1984	41,479	22.2	1977	191,090	1984	13,501	7.1
1983	190,508	1985	42,570	22.3	1978	188,107	1985	13,602	7.2
1984	193,152	1986	43,586	22.6	1979	186,333	1986	13,342	7.2
1985	197,114	1987	43,204	21.9	1980	186,009	1987	13,629	7.3
				Women					
1970	68,878	1972	9,557	13.9	1965	36,213	1972	2,103	5.8
1971	72,996	1973	9,760	13.4	1966	39,482	1973	2,450	6.2
1972	77,671	1974	10,545	13.6	1967	44,002	1974	2,607	5.9
1973	83,839	1975	11,005	13.1	1968	53,463	1975	2,836	5.3
1974	91,793	1976	12,072	13.2	1969	63,196	1976	2,981	4.7
1975	93,342	1977	13,154	14.1	1970	68,878	1977	3,107	4.5
1976	95,597	1978	13,690	14.3	1971	72,996	1978	3,313	4.5
1977	97,453	1979	14,040	14.4	1972	77,671	1979	3,583	4.6
1978	100,060	1980	14,383	14.4	1973	83,839	1980	3,801	4.5
1979	102,292	1981	14,875	14.5	1974	91,793	1981	4,023	4.4
1980	105,974	1982	15,768	14.9	1975	93,342	1982	4,143	4.4
1981	106,783	1982	16,873	15.8	1976	95,597	1983	4,468	4.7
1982	111,473	1984	17,396	15.6	1977	97,453	1984	4,574	4.7
1983	114,022	1985	18,018	15.6	1978	100,060	1985	4,653	4.7
1984	115,358	1986	18,871	16.4	1979	102,292	1986	4,731	4.6
1985	118,837	1987	19,301	16.2	1980	105,974	1987	4,855	4.6

SOURCE: Digest of Education Statistics 1988, National Center for Education Statistics

TABLE 2-24

ASSOCIATE DEGREES AND OTHER SUB-BACCALAUREATE AWARDS BY CURRICULUM AND SEX, 1985-86

Field of study	Less than 1-year awards			1- to 4-year awards			Associate degrees		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
1	2	3	4	5	6	7	8	9	10
Total	**38,207**	**16,363**	**21,844**	**120,380**	**55,333**	**65,047**	**446,047**	**196,166**	**249,881**
Agriculture and natural resources, total	631	524	107	2,891	2,028	863	5,741	3,975	1,766
Agricultural business and agricultural production	588	489	99	2,087	1,452	635	3,651	2,620	1,031
Agricultural science	12	8	4	591	424	167	1,096	526	570
Renewable natural resources	31	27	4	213	152	61	994	829	165
Architecture and environmental design	34	4	30	550	76	474	1,432	211	1,221
Area and ethnic studies	18	14	4	64	46	18	33	10	23
Business and management	12,094	2,793	9,301	38,716	8,681	30,035	117,358	38,429	78,929
Accounting	121	29	92	748	172	576	5,094	1,517	3,577
Business and management, general	268	126	142	642	234	408	12,163	5,132	7,031
Business administration and management	189	93	96	825	370	455	18,988	8,448	10,540
Business and management, other	1,933	959	974	5,984	4,280	1,704	11,268	5,933	5,335
Business data processing	976	232	744	4,179	1,271	2,908	15,926	7,065	8,861
Secretarial and related programs	4,182	169	4,013	15,130	309	14,821	21,095	283	20,812
Business and office, other	1,648	283	1,365	3,475	719	2,756	15,373	4,641	10,732
Marketing and distribution	1,558	471	1,087	3,144	762	2,382	16,553	5,022	11,531
Consumer and personal services	1,219	431	788	4,589	564	4,025	898	388	510
Communications	65	38	27	119	81	38	2,055	1,164	891
Communications technologies	46	28	18	314	211	103	1,929	1,156	773
Computer and information sciences	714	375	339	1,889	838	1,051	10,704	5,506	5,198
Education	390	76	314	573	94	479	7,391	2,256	5,135
Engineering	44	34	10	465	424	41	5,256	4,597	659
Engineering technologies	5,342	4,863	479	28,419	26,949	1,470	58,083	52,880	5,203
Mechanics and repairers	2,487	2,238	249	13,418	12,901	517	10,996	10,204	792
Construction trades	1,278	1,234	44	3,289	3,138	151	2,131	2,041	90
Engineering technologies, other	1,577	1,391	186	11,712	10,910	802	44,956	40,635	4,321
Foreign languages	26	11	15	63	12	51	437	239	198
Health sciences	11,703	2,722	8,981	25,789	3,502	22,287	66,559	7,884	58,675
Dental assisting	188	4	184	2,623	114	2,509	4,051	357	3,694
Emergency medical technician-ambulance	2,535	1,632	903	721	505	216	88	62	26
Emergency medical technician-paramedic	312	197	115	546	414	132	267	189	78
Medical lab technician	0	0	0	110	24	86	2,609	439	2,170
Medical assisting	552	5	547	1,653	32	1,621	2,004	39	1,965
Nursing assisting	5,027	490	4,537	3,096	311	2,785	33	10	23
Practical nursing	979	102	877	10,570	627	9,943	991	76	915
Nursing, general	1	0	1	674	40	634	38,610	2,818	35,792
Health sciences, other	2,109	292	1,817	5,796	1,435	4,361	17,906	3,894	14,012
Home economics	1,192	379	813	4,099	962	3,137	9,469	2,698	6,771
Law	181	122	59	819	126	693	2,259	280	1,979
Letters	38	12	26	226	93	133	548	198	350
Liberal/general studies	103	42	61	1,754	784	970	107,672	46,971	60,701
Library and archival sciences	16	2	14	66	8	58	126	15	111
Life sciences	1	0	1	81	49	32	998	424	574
Mathematics	4	4	0	99	61	38	602	370	232
Military sciences	0	0	0	970	938	32	30	29	1
Multi/interdisciplinary studies	153	52	101	134	101	33	9,586	4,371	5,215
Parks and recreation	6	0	6	147	67	80	634	323	311
Philosophy and religion	3	1	2	161	126	35	114	79	35
Theology	268	142	126	559	303	256	705	432	273
Physical sciences	3	1	2	120	86	34	2,107	1,255	852
Science technologies	0	0	0	101	75	26	1,054	641	413
Physical sciences, other	3	1	2	19	11	8	1,053	614	439
Psychology	12	1	11	54	19	35	939	294	645
Protective services	1,430	1,213	217	2,066	1,520	546	12,096	8,932	3,164
Criminal justice administration and studies	515	410	105	510	332	178	5,579	3,873	1,706
Law enforcement and security services	292	249	43	1,019	743	276	4,167	3,061	1,106
Fire control and safety	348	327	21	394	376	18	1,666	1,607	59
Protective services, other	275	227	48	143	69	74	684	391	293
Public affairs	1,982	1,692	290	614	316	298	3,649	1,559	2,090
Transportation and material moving	1,860	1,642	218	296	207	89	1,338	1,039	299
Public affairs, other	122	50	72	318	109	209	2,311	520	1,791
Social sciences	34	16	18	179	88	91	2,540	1,045	1,495
Visual and performing arts	1,674	1,202	472	8,380	6,744	1,636	13,961	8,166	5,795
Fine arts, general	14	6	8	69	30	39	924	322	602
Graphic arts technician	133	20	113	237	77	160	1,855	592	1,263
Precision production	1,313	1,112	201	7,609	6,407	1,202	9,104	6,341	2,763
Visual and performing arts, other	214	64	150	465	230	235	2,078	911	1,167
Undistributed	0	0	0	0	0	0	1,034	418	616

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, March 1973, and Doctorate recipients from United States Universities, Summary Reports, 1972-1988, National Research Council

TABLE 3-1

DOCTORATES AWARDED IN PROFESSIONAL FIELDS BY SUBFIELD AND SEX, 1920-1988

	CY 1920-FY 1972			FY 1973-FY 1982			FY 1983-FY 1986			FY 1987			FY 1988		
SUBFIELD	Total	Women	%W	Total	Women	%W	Total	Women	%W	Total	Women	%W	Total	Women	%W
PROFESSIONAL FIELDS, TOTAL	15,032	1,634	10.9	15,933	3,798	23.8	7437	2362	31.8	2,063	679	32.9	2,092	672	32.1
BUSINESS ADMINISTRATION, SUBTOTAL(1)	6,399	170	2.7	10,048	1,768	17.6	3318	655	19.7	980	229	23.4	1,039	247	23.8
Accounting (2)							631	154	24.4	161	37	23.0	174	56	32.2
Banking & Finance (2)							447	44	9.8	155	28	18.1	148	22	14.9
Business Admin & Management (2)							759	121	15.9	224	57	25.4	267	55	20.6
Business Economics (2)							103	14	13.6	27	2	7.4	27	2	7.4
Marketing Management & Research (2)							402	105	26.1	113	33	29.2	126	32	25.4
Business Statistics (2)							27	2	7.4	8	1	12.5	6	1	16.7
Operations Research (2)							174	24	13.8	64	11	17.2	50	11	22.0
Ogranizational Behavior (2)							247	90	36.4	65	32	49.2	74	33	44.6
Business & Management, General							192	32	16.7	75	12	16.0	80	14	17.5
Business & Management, Other (2)							336	69	20.5	88	16	18.2	87	21	24.1
COMMUNICATIONS, SUBTOTAL (2)	406	32	7.9	187	33	17.6	1031	430	41.7	309	143	46.3	247	96	38.9
Communications Research (2)							250	106	42.4	90	34	37.8	72	24	33.3
Journalism (3)	406	32	7.9	187	33	17.6	78	20	25.6	7	3	42.9	21	5	23.8
Radio & Television (2)							79	24	30.4	16	5	31.3	12	2	16.7
Communications, General (2)							292	127	43.5	102	44	43.1	70	32	45.7
Communications, Other (2)							332	153	46.1	94	57	60.6	72	33	45.8
OTHER PROFESSIONAL FIELDS, SUBTOTAL	8,227	1,432	17.4	5,698	1,997	35.0	3088	1277	41.4	774	307	39.7	806	329	40.8
Architecture, Environmental Design(4)	57	4	7.0				122	24	19.7	33	6	18.2	31	6	19.4
Home Economics	690	653	94.6	720	623	86.5	364	305	83.8	67	60	89.6	58	49	84.5
Law	1,315	56	4.3	248	14	5.6	99	5	5.1	27	6	22.2	33	5	15.2
Library & Archival Science	428	140	32.7	645	304	47.1	248	138	55.6	48	38	79.2	57	33	57.9
Public Administration (2)							434	117	27.0	78	19	24.4	92	28	30.4
Social Work	886	314	35.4	1,614	795	49.3	864	528	61.1	214	117	54.7	236	140	59.3
Theology	4,761	260	5.5	2,080	173	8.3	884	128	14.5	253	36	14.2	250	40	16.0
Professional Fields, Other (5)	90	5	5.6	391	88	22.5	73	32	43.8	54	25	46.3	49	28	57.1

(1) Originally "Business & Commerce, Business Administration," changed to "Business Aministration" in 1962, and to "Business Administration and Management" in 1983. (2) Broken out in 1983. (3) Originally "Writing & Journalism." Changed to "Journalism" in 1962.
(4) Dropped in 1962. Added in 1983 as "Architecture and Environmental Design." (5) Added in 1968.

SOURCE: Series of Earned Degrees Conferred, National Center for Education Statistics

TABLE 3-3

PERCENTAGE OF FIRST PROFESSIONAL DEGREES AWARDED TO WOMEN, BY FIELD, 1971-72 - 1986-87

YEAR	Dentistry	Medicine	Optometry	Osteopathic Med	Pharmacy	Podiatry Podiatric Med	Veterinary	Chiropractic	Law, General	Theological Prof.	Other	ALL FIELDS
1971-72	1.2	9.0	2.2	3.5		0.3	9.4		7.2	1.9	20.8	6.3
1972-73	1.4	9.0	2.6	2.9	25.1	0.3	10.2		8.1	3.4	11.8	7.1
1973-74	2.0	11.2	4.2	2.8		1.1	11.2		11.5	5.5	26.1	9.9
1974-75	3.1	13.2	5.0	5.3	28.1	1.1	15.9		15.1	6.8	11.0	12.5
1975-76	4.5	16.2	7.7	7.2	29.6	2.6	18.1	9.3	19.2	7.6	10.0	15.6
1976-77	7.4	19.2	11.0	8.8	27.5	3.3	22.8	8.5	22.5	9.5	47.8	18.7
1977-78	11.2	21.5	13.1	12.5	30.2	4.8	24.5	10.0	26.0	11.3		21.5
1978-79	11.8	23.1	13.0	15.7	36.0	7.2	28.9	10.6	28.5	13.1	13.1	23.6
1979-80	13.5	23.4	15.7	15.7	37.5	12.6	32.8	12.1	30.2	14.4		24.9
1980-81	14.4	24.7	18.9	16.4	43.8	11.6	35.2	16.6	32.1	13.9		26.6
1981-82	15.4	25.0	19.9	17.9	41.7	10.5	36.2	17.9	33.4	15.7		27.5
1982-83	17.1	26.7	22.1	19.4	46.7	12.5	41.0	20.1	36.2	16.9		29.9
1983-84	19.6	28.2	24.1	21.8	53.2	12.7	40.5	22.7	36.8	17.5	38.3	31.0
1984-85	20.7	30.4	27.2	23.7	50.1	20.2	47.9	22.1	38.5	18.5	41.2	32.8
1985-86	22.6	30.8	27.7	25.1	52.1	20.3	47.5	24.8	39.0	19.5	41.9	33.4
1986-87	24.0	32.4	35.6	25.5	59.2	20.8	48.4	25.2	40.2	20.3		35.0

TABLE 3-4

FIRST PROFESSIONAL DEGREES BY FIELD, RACIAL GROUP AND SEX, 1987

FIELD	TOTAL			White non-Hispanic			Black non-Hispanic			Hispanic			Asian/Pacif Isl			Am Ind/Ala Nat			Foreign		
	Total*	Women	%	Total	Women	%	Total	Women	%B	Total	Wom	%H	Total	Wom	%A	Total	Wom	%I	Total	Wom	%F
All Fields 1982-8	73,136	21,826	30	64,551	16,922	88	2,931	1,159	4.0	1,541	410	2.1	1,456	465	2.0	192	58	0.3	669	132	0.9
All Fields 1984-8	75,562	24,782	33	61,566	20,051	81	2,837	1,348	3.8	1,882	644	2.5	1,754	646	2.3	244	71	0.3	759	186	1.0
All Fields 1986-8	71,617	25,095	35	62,688	21,538	88	3,420	1,585	4.8	2,051	748	2.9	2,270	850	3.2	304	121	0.4	884	252	1.2
Dentistry	4,739	1,137	24	3,856	850	81	262	93	5.5	169	49	3.6	319	101	6.7	13	2	0.3	120	42	2.5
Medicine	15,429	4,998	32	13,137	4,134	85	786	349	5.1	484	165	3.1	805	271	5.2	66	30	0.4	151	49	1.0
Optometry	1,082	385	36	943	318	87	18	10	1.7	29	9	2.7	74	41	6.8	4	1	0.4	14	6	1.3
Osteopathic Med.	1,618	412	25	1,498	366	93	26	19	1.6	25	8	1.5	45	14	2.8	13	3	0.8	11	2	0.7
Pharmacy	861	510	59	531	295	62	112	75	13.0	42	26	4.9	110	83	12.8	6	0	0.7	60	31	7.0
Podiatry	591	123	21	521	98	88	33	15	5.6	11	3	1.9	12	4	2.0	2	0	0.3	12	3	2.0
Veterinary Med.	2,230	1,080	48	2,052	1,017	92	29	17	1.3	90	17	4.0	24	13	1.1	31	15	1.4	4	1	0.2
Chiropractic Med.	2,493	629	25	2,298	575	92	26	10	1.0	39	11	1.6	30	5	1.2	4	1	0.2	96	27	3.9
Law	36,056	14,495	40	32,242	12,714	89	1,735	913	4.8	1,054	444	2.9	694	301	1.9	152	68	0.4	179	55	0.5
Theology	6,518	1,326	20	5,610	1,172	86	393	84	6.0	108	16	1.7	157	17	2.4	13	1	0.2	237	36	3.6

* Includes thoses those race/ethnicity could not be imputed.

SOURCE: Digest of Education Statistics, NCES: Review of Legal Education in the United States, 1978, and Fall--1980-86, American Bar Association; Journal of the American Medical Association, Vol. 238, No. 26, December 26, 1977; Vol. 246 No. 25, December 25, 1981; Vol. 248, No. 24, December 24-31, 1982; and Vol.250, No. 12, September 23, 1983; Annual Report, Dental Education Series, 1975-78, 1980-86, American Dental Association; Fall Enrollments Questionnaire 1974-77 and Annual Statistical Report, 1981, American Association of Colleges of Osteopathic Medicine; and Personal Communications from the Association of American Veterinary Medical Colleges; the American Association of Dental Schools, American Association of Colleges of Podiatric Medicine, Association of American Medical Colleges and the American Association of Colleges of Osteopathic Medicine

TABLE 3-5

ENROLLMENT FOR FIRST PROFESSIONAL DEGREES BY FIELD AND SEX, SELECTED YEARS, FALL 1960 - 1988

YEAR		MEDICINE		DENTISTRY		OPTOMETRY		OSTEOPATHY		PODIATRY		VET. MEDICINE		LAW	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1960-61	T	30,288		13,580		1,101						3,832		43,695	
	W	1,745	5.8	88	0.6	40	3.6					137	3.6	1,651	3.8
1966-67	T	28,685		11,826		1,671		1,431		678		2,245		46,878	
	W	2,099	7.3	180	1.5	37	2.2	32	2.2	9	1.3	183	8.1	2,032	4.3
1968-69	T	35,733		15,542		2,241		1,878		1,108		4,488		64,220	
	W	3,129	8.8	171	1.1	53	2.4	54	2.9	8	0.7	351	7.8	3,745	5.8
1971-72	T	43,965		17,433		2,691		2,301		1,267		5,163		94,416	
	W	4,730	10.8	355	2.0	86	3.2	79	3.4	15	1.2	593	11.5	9,075	9.6
1973-74	T	49,511		19,215		3,360		2,799		1,633		5,528		103,641	
	W	7,701	15.6	892	4.6	227	6.8	180	6.5	40	2.4	957	17.3	16,730	16.1
1975-76	T	55,622		20,517		3,811		3,438		2,105		5,694		113,205	
	W	11,386	20.5	1,987	9.7	415	10.9	364	10.6	108	5.1	1,337	23.5	26,403	23.3
1976-77	T	58,266		21,013		4,033		3,671		2,204		6,571		117,451	
	W	13,059	22.4	2,349	11.1	542	13.4	472	12.9	157	7.1	1,805	27.5	29,538	29.2
1977-78	T	60,039		21,510		4,440		3,926		2,388		6,903		118,557	
	W	14,218	23.7	2,796	13.0	699	15.7	570	14.8	259	10.8	2,129	30.8	32,538	27.5
1978-79	T	62,213		22,179		4,436		4,254		2,498		7,312		119,120	
	W	15,102	24.3	3,112	14.0	757	17.1	688	16.2	268	10.7	2,471	33.8	36,251	30.4
1979-80	T	63,800		22,482		4,500		4,479		2,531		7,007		122,801	
	W	16,141	25.3	3,482	15.5	868	19.3	775	17.3	305	12.1	2,570	36.7	38,627	31.5
1980-81	T	65,497		22,842		4,540		4,940		2,577		8,154		125,397	
	W	17,204	26.3	3,879	17.0	985	21.7	971	19.7	306	11.9	3,220	29.4	42,122	33.6
1981-82	T	66,485		22,621		4,541		5,304		2,584		8,499		127,312	
	W	18,555	25.0	4,227	18.7	1,077	23.7	1,108	20.9	361	14.0	3,576	42.0	44,902	35.3
1982-83	T	66,886		22,235		4,561		5,822		2,608		8,682		127,828	
	W	19,627	29.3	4,457	20.0	1,173	25.7	1,317	22.6	428	16.4	4,028	46.4	47,083	36.8
1983-84	T	67,327		21,428		4,539		6,212		2,556		8,816		127,195	
	W	20,635	30.6	4,733	22.1	1,291	28.4	1,526	24.6	476	18.6	4,152	47.1	47,980	37.7
1984-85	T	67,016		20,588		4,460		6,547		2,616		8,917		125,698	
	W	21,316	31.8	4,899	23.8	1,391	31.2	1,707	26.1	569	21.7	4,376	49.1	48,499	38.6
1985-86	T	66,585		19,563		4,209		6,671		2,749		8,938		124,092	
	W	21,650	32.5	4,944	25.3	1,451	34.5	1,768	26.5	620	22.6	4,536	50.8	49,050	39.5
1986-87	T	66,125		18,673		4,494		6,640		2,852		8,887		123,277	
	W	22,100	33.4	5,068	27.1	1,684	37.5	1,853	27.9	672	23.7	4,714	53.0	49,522	40.2
1987-88	T	65,735		17,094		4,495		6,586		2,790		8,751		123,198	
	W	22,481	34.2	5,265	30.8	1,772	39.4	1,904	28.9	680	24.4	4,816	55.0	41,055	41.0
1988-89	T	65,300				4,708		6,614		2,608		8,558			
	W	22,855	35.0			1,977	42.0	1,986	30.0	671	25.7	4,895	57.2		

SOURCE: Earned Degrees Conferred Series, National Center for Education Statistics, 1947-48--1986-87; Journal of American Medical Association, Vol. 243, No.9, March 1980; Vol. 246, No. 25, December 25, 1981; Vol. 248, No. 24, December 24/31, 1982, copyright by the American Medical Association; A Review of Legal Education in the United States, Fall 1979 - Fall 1986, American Bar Association; and personal communication from the Association of American Medical Colleges, American Veterinary Medicine Association, American Dental Association, American Podiatry Association and the American Pharmaceutical Association, 1989.

TABLE 3-2

FIRST PROFESSIONAL DEGREES CONFERRED BY FIELD AND SEX, SELECTED YEARS 1947-48 THRU 1986-89

YEAR		MEDICINE		DENTISTRY		OPTOMETRY		OSTEOPATHY		PODIATRY		VET. MEDICINE		LAW		THEOLOGY		ARCHITECTURE		PHARMACY	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1947-48	T	6,714		1,625		1,425						242		10,990				1,074		2,104	
	W	744	11.1	37	2.3	40	2.8					13	5.4	420	3.8			131	12.2	449	21.3
1949-50	T	5,612		2,579		1,801		346				803		14,312		3,221		2,563		5,751	
	W	584	10.4	18	0.7	19	1.1	19	5.5			12	1.5	421	3.0	211	6.6	122	4.8	441	7.7
1953-54	T	6,757		3,102		706		499				803		9,298		4,463		1,623		3,885	
	W	343	9.1	39	0.8	20	2.8	10	2.2			10	1.2	322	3.5	119	2.7	92	5.7	343	8.8
1957-58	T	6,861		3,065		264		466				809		9,394		4,989		1,612		3,782	
	W	351	5.1	34	0.9	1	0.4	6	1.3			13	1.6	272	2.9	61	1.2	76	4.7	391	10.3
1959-60	T	7,074		3,247		339		423				825		9,240		5,184		1,801		3,492	
	W	394	5.9	26	0.8	4	1.2	8	1.9			18	2.2	230	2.5	87	1.6	57	3.3	416	13.5
1963-64	T	7,342		3,196		305		352				852		10,679		4,423		2,059		2,207	
	W	432	6.3	14	0.4	5	1.7	4	1.1			32	3.9	307	2.9	65	1.5	78	3.9	254	11.5
1965-66	T	7,720		3,264		380		360		136		922		13,246		4,124		2,599		3,763	
	W	516	7.2	35	1.1	3	0.8	5	1.4	2	1.5	52	6.0	470	3.5	74	1.8	103	4.6	536	16.6
1970-71	T	8,986		3,777		531		472		241		1,252		17,652		5,055		5,578		4,593	
	W	829	9.2	46	1.2	13	2.4	11	2.3	5	2.0	98	7.8	1,293	7.3	118	2.3	667	12.0	951	25.2
1972-73	T	10,398		5,086		771		523		259		1,299		27,484		5,291		6,980		5,079	
	W	939	9.0	58	1.4	20	2.6	15	2.9	1	0.4	133	10.2	2,224	8.1	182	3.4	923	13.2	1,277	25.1
1974-75	T	12,550		4,809		792		665		353		1,415		29,497		5,098		8,238		6,487	
	W	1,654	13.2	149	3.1	40	5.1	35	5.3	4	1.1	225	15.9	4,455	15.1	348	6.8	1,435	17.4	1,821	28.1
1976-77	T	13,599		5,138		953		852		486		1,586		34,104		5,861		9,222		7,495	
	W	2,611	19.2	374	7.3	105	11.0	75	8.8	16	3.3	362	22.8	7,657	22.5	554	9.5	1,973	21.4	2,434	32.5
1978-79	T	14,925		5,488		1,046		1,065		572		1,714		35,387		6,607		9,297		6,919	
	W	3,452	23.1	652	11.9	136	13.0	167	15.7	41	7.2	496	28.9	10,084	28.5	866	13.1	2,401	25.8	2,759	39.9
1979-80	T	15,046		5,321		1,085		1,011		580		1,852		35,855		7,012		9,176		7,122	
	W	3,523	23.4	719	13.5	170	15.7	159	15.7	73	12.6	615	33.2	10,828	30.2	1,009	14.4	2,548	27.8	2,919	41.0
1980-81	T	15,505		5,460		1,097		1,145		597		1,922		36,331		6,898		9,455		6,640	
	W	3,833	24.7	788	14.4	207	18.9	188	16.4	69	11.6	677	35.2	11,768	32.1	962	13.9	2,645	28.1	2,910	43.8
1981-82	T	15,985		5,550		1,113		1,017		599		1,886		35,543		6,091		9,728		6,448	
	W	3,991	25.0	825	14.9	224	20.0	186	18.3	63	10.5	668	35.4	11,607	32.7	1,084	15.7	2,903	29.9	3,031	47.0
1982-83	T	15,728		5,371		1,120		1,317		631		2,012		36,540		6,494		9,823		5,919	
	W	4,193	26.7	838	15.6	246	22.0	261	19.8	79	12.5	822	40.9	13,218	36.2	1,099	16.9	3,420	34.8	2,925	49.4
1983-84	T	16,343		5,274		1,086		1,287		607		2,138		37,012		6,878		9,186		5,393	
	W	4,632	28.3	1,089	20.6	262	24.1	262	20.4	77	12.7	887	41.5	13,630	36.8	1,205	17.5	3,291	35.9	2,657	49.3
1984-85	T	16,318		5,337		1,115		1,489		582		2,178		37,451		7,221		9,325		5,011	
	W	4,904	30.1	1,063	19.9	303	27.2	353	23.7	118	20.3	1,043	47.9	14,421	38.5	1,335	18.5	3,306	35.5	2,668	53.2
1985-86	T	16,117		4,958		1,029		1,560		612		2,270		35,844		7,283		9,119		6,010	
	W	4,957	30.8	1,094	22.1	285	27.7	392	25.1	124	20.3	1,079	47.5	13,970	39.0	1,418	19.5	3,295	35.8	3,265	54.3
1986-87	T	15,620		4,741		1,082		1,587		591		2,230		36,172		7,181		8,922		6,066	
	W	5,054	32.4	1,138	24.0	385	35.6	412	26.0	123	20.8	1,080	48.4	14,529	40.2	1,387	19.3	3,332	37.3	3,454	56.9
1987-88	T	15,919		4,581		1,070		1,587				2,219								6,184	
	W	5,215	32.8	1,263	27.6			438	27.9			1,069	48.2							3,617	58.5
1988-89	T							1,617				2,212									
	W							485	30.0			1,007	45.51								

SOURCE: Earned Degrees Conferred, 1971-1987, National Center for Education Statistics

TABLE 3-6

DEGREES IN ARCHITECTURE AND ENVIRONMENTAL DESIGN BY SEX AND LEVEL, 1970-71 - 1986-87

	BACHELORS			MASTERS			DOCTORATES		
YEAR	Both Sexes	Women Only	% Women	Both Sexes	Women Only	% Women	Both Sexes	Women Only	% Women
1970-71	5,578	667	12.0	1,724	243	14.1	36	3	8.3
1971-72	6,452	775	12.0	1,928	281	14.6	50	7	14.0
1972-73	6,980	923	13.2	2,319	364	15.7	58	4	6.9
1973-74	7,840	1,164	14.8	2,733	502	18.4	69	4	5.8
1974-75	8,238	1,435	17.4	2,953	599	20.3	69	11	15.9
1975-76	9,169	1,757	19.2	3,215	670	20.8	82	13	15.9
1976-77	9,222	1,973	21.4	3,213	724	22.5	73	11	15.1
1977-78	9,266	2,199	23.7	3,121	812	26.0	73	16	21.9
1978-79	9,297	2,401	25.8	3,124	889	28.5	96	22	22.9
1979-80	9,176	2,548	27.8	3,157	900	28.5	79	13	16.5
1980-81	9,455	2,655	28.1	3,153	919	29.1	93	20	21.5
1981-82	9,728	2,903	29.8	3,327	1,085	32.6	80	22	27.5
1982-83	9,823	3,420	34.8	3,357	1,133	33.8	97	23	23.7
1983-84	9,186	3,291	35.8	3,223	1,026	31.8	84	22	26.2
1984-85	9,325	3,306	35.5	3,275	1,127	34.4	89	23	25.8
1985-86	9,119	3,295	36.1	3,260	1,131	34.7	73	17	23.3
1986-87	8,922	3,332	37.3	3,142	1,069	34.0	92	26	28.3
TOTALS	146,776	38,044	25.9	50,224	13,474	26.8	1,293	257	19.9

FIELD: Architecture

SOURCE: American Institute of Architects, Personal Communication October 1989

TABLE 3-7

FULL-TIME ENROLLMENTS IN ARCHITECTURE BY TYPE OF PROGRAM, SEX, MINORITY STATUS AND CITIZENSHIP; 1975, 1985 & 1987-89

YEAR AND TYPE OF DEGREE PROGRAM	TOTAL	WOMEN No.	WOMEN %	MINORITY No.	MINORITY %	FOREIGN No.	FOREIGN %
Non-Accredited Deg*							
1975	14,520	1,923	13.2	1,266	8.7	580	4.0
1985	11,584	3,358	29.0	1,850	16.0	1,041	9.0
1987	10,621	3,067	28.9	1,715	16.1	755	7.1
1988	10,759	3,488	32.4	1,923	17.9		
1989	11,526	3,559	30.9	2,131	18.5		
BA in Architecture (5-Year Program)							
1975	15,289	1,938	12.7	1,338	8.8	3,653	23.9
1985	16,479	4,224	25.6	2,939	17.8	1,972	12.0
1987	17,175	4,654	27.1	3,030	17.6	1,803	10.5
1988	17,527	4,848	27.7	3,534	20.2		
1989	18,021	4,768	26.5	3,753	20.8		
MA in Architecture							
1975	2,754	403	14.6	306	11.1	222	8.1
1985	4,246	1,440	33.9	563	13.3	695	16.4
1987	4,377	1,501	34.3	464	10.6	764	17.5
1988	3,982	1,432	36.0	435	10.9		
1989	4,302	1,500	34.9	474	11.0		

* Baccalaureate in Architecture

TABLE 3-8

AIA MEMBERSHIP BY RACE AND SEX, SEPTEMBER 1989

Estimated registered architects in U.S.	80,000	
		%
Members of AIA	54,878	100.0
Women*	4,494	8.2
Minorities*		
Indian/Eskimo/Aleut	51	0.1
Asian/Pacific Islander	1,748	3.2
Hispanic	952	1.7
Black	547	1.0
Other	179	0.3

* Includes only those who indicated sex and/or ethnicity.

FIELD: Accounting

SOURCE: Minority Recruitment and Equal Opportunity Committee Report, 1981-1988, by Sharon L. Donahue, American Institute of Certified Public Accountants

TABLE 3-9

NUMBER AND PERCENT OF PROFESSIONALS EMPLOYED IN MAJOR ACCOUNTING FIRMS BY MINORITY GROUP AND SEX, SELECTED YEARS, 1976-1988

YEAR	Am. Indian No.	%AI	Asians No.	%A	Blacks No.	%B	Hispanics No.	%H	Total Min No.	%M	Total Women No.	%W	Total Prof
1976	26	1.2	641	29.6	955	44.2	541	25.0	2163	3.8	5783	10.3	56336
1978	34	1.3	831	32.9	1042	41.2	620	24.5	2527	4.3	8514	14.3	59352
1980	49	1.6	1061	35.7	1204	40.5	662	22.2	2976	4.4	13294	19.8	67005
1981	51	1.5	1349	39.9	1193	35.3	788	23.3	3381	4.6	15984	21.9	73046
1982	51	1.4	1454	40.4	1185	33.0	905	25.2	3595	4.7	18509	24.1	76670
1983	50	1.4	1346	37.8	1132	31.8	1037	29.1	3565	4.5	20850	26.1	79896
1984	42	1.1	1567	41.2	1125	29.6	1073	28.2	3807	4.6	22818	27.3	83610
1986	44	0.9	2219	46.0	1247	25.9	1311	27.2	4821	5.2	27611	30.0	92150
1987	52	1.0	2520	47.2	1358	25.4	1409	26.4	5339	5.5	29695	30.8	96410
1988	59	1.0	3029	50.3	1388	23.1	1543	25.6	6019	5.7	33064	31.5	104928
TOTALS	458	1.2	16017	41.9	11829	31.0	9889	25.9	38193	4.8	196122	24.8	789403

TABLE 3-10

PLACEMENT OF ACCOUNTING GRADUATES FROM THE HISTORICALLY BLACK AND MINORITY COLLEGES AND UNIVERSITIES, SELECTED YEARS, 1973-1987

YEAR	Total Majors	Total Graduates	Public Accounting		Industry		Government		Nonprofit Org		Graduate Schools		Other		Unknown	
			No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1973	4003	837	126	15.1	244	29.2	136	16.2	19	2.3	51	6.1	38	4.5	223	26.6
1975	5936	1034	170	16.4	306	29.6	158	15.3	26	2.5	94	9.1	34	3.3	246	23.8
1977	7303	1061	147	13.9	396	37.3	163	15.4	32	3.0	111	10.5	31	2.9	181	17.1
1979	11914	1775	201	11.3	543	30.6	297	16.7	60	3.4	139	7.8	39	2.2	496	27.9
1980	10851	1761	180	10.2	544	30.9	252	14.3	64	3.6	118	6.7	58	3.3	545	30.9
1981	10380	1555	208	13.4	488	31.4	217	14.0	38	2.4	120	7.7	66	4.2	418	26.9
1982	10138	1506	154	10.2	422	28.0	167	11.1	48	3.2	116	7.7	40	2.7	559	37.1
1983	8757	1257	147	11.7	370	29.4	219	17.4	46	3.7	125	9.9	37	2.9	313	24.9
1984	11350	1658	201	12.1	386	23.3	256	15.4	56	3.4	179	10.8	45	2.7	535	32.3
1985	10148	1409	163	11.6	380	27.0	194	13.8	41	2.9	133	9.4	60	4.3	438	31.1
1986	7288	1145	98	8.6	294	25.7	166	14.5	34	3.0	114	10.0	39	3.4	400	34.9
1987	10274	1506	160	10.6	388	25.8	215	14.3	45	3.0	141	9.4	53	3.5	506	33.6
TOTALS	108342	16504	1955	11.8	4761	28.8	2440	14.8	509	3.1	1441	8.7	540	0.5	4860	18.8

FIELD: Accounting

SOURCE: Earned Degrees Conferred, 1971 through 1987, National Center for Education Statistics

TABLE 3-11

DEGREES IN ACCOUNTING BY SEX AND LEVEL, 1970-71 - 1986-87

	BACHELOR'S			MASTER'S			DOCTOR'S		
YEAR	Both Sexes	Women Only	% Women	Both Sexes	Women Only	% Women	Both Sexes	Women Only	% Women
1971-72	24,801	2,494	10.1	1,377	108	7.8	51	0	0.0
1972-73	28,289	3,325	11.8	1,627	141	8.7	83	1	1.2
1973-74	29,770	4,176	14.0	1,806	189	10.5	70	4	5.7
1974-75	31,605	5,665	17.9	2,232	280	12.5	60	4	6.7
1975-76	35,806	7,645	21.4	2,730	478	17.5	55	5	9.1
1976-77	39,183	9,942	25.4	3,278	636	19.4	53	4	7.5
1977-78	40,856	12,047	29.5	3,389	729	21.5	44	3	6.8
1978-79	42,131	13,754	32.6	3,595	833	23.2	52	7	13.5
1979-80	43,556	15,760	36.2	3,496	965	27.6	51	9	17.6
1980-81	43,344	17,046	39.3	3,449	1,034	30.0	56	8	14.3
1981-82	45,542	19,329	42.4	3,246	1,086	33.5	61	8	13.1
1982-83	45,732	20,771	45.4	3,046	1,049	34.4	66	13	19.7
1983-84	47,692	22,416	47.0	3,297	1,207	36.6	53	17	32.1
1984-85	47,005	23,050	49.0	3,207	1,259	39.3	59	13	22.0
1985-86	45,617	22,973	50.4	3,101	1,210	39.0	53	15	28.3
1986-87	43,813	22,546	51.5	2,920	1,195	40.9	61	17	27.9
TOTALS	634,742	222,939	35.1	45,796	12,399	27.1	928	128	13.8

SOURCE: Minority Recruitment and Equal Opportunity Committee Report, 1981-1988, by Sharon L.Donahue, American Institute of Certified Public Accountants

TABLE 3-12

NUMBER OF CPA's EMPLOYED IN MAJOR ACCOUNTING FIRMS BY MINORITY GROUP AND SEX, 1976 - 1988

YEAR	American Indian	%I	Asian	%A	Blacks	%B	Hispanics	%H	Total Min	Total Wom
1976	14	3.1	171	38.2	114	25.4	149	33.3	448	1080
1977	14	2.8	195	39.0	129	25.8	162	32.4	500	1532
1978	15	2.5	235	39.8	139	23.6	201	34.1	590	1944
1979	22	2.9	316	42.1	172	22.9	240	32.0	750	2631
1980	26	3.1	375	44.9	194	23.2	240	28.7	835	3493
1981	23	2.4	445	46.5	212	22.1	278	29.0	958	4665
1982	26	2.5	475	45.4	240	22.9	305	29.2	1046	5510
1983	23	2.2	414	39.2	258	24.5	360	34.1	1055	6432
1984	17	1.5	511	44.7	247	21.6	369	32.3	1144	6870
1985	21	2.0	478	45.6	244	23.3	305	29.1	1048	6239
1986	21	1.6	598	46.2	262	20.3	412	31.9	1293	7139
1987	87	5.9	659	45.0	275	18.8	444	30.3	1465	8939
1988	88	5.8	743	49.3	259	17.2	417	27.7	1507	9834

Source: Minority Recruitment and Equal Opportunity Committee 1984, 1986 and 1988 Report, American Institute of Certified Public Accountants.

TABLE 3-13

MINORITIES WHO ARE PARTNERS IN MAJOR ACCOUNTING FIRMS AND MINORITY ACCOUNTING FIRMS, 1984, 1986 AND 1988

	1984		1986		1988	
MINORITY	MAJOR FIRMS	MINORITY FIRMS	MAJOR FIRMS	MINORITY FIRMS	MAJOR FIRMS	MINORITY FIRMS
American Indian	6	2	7	2	5	0
Asian	56	45	80	47	107	44
Black	23	78	26	82	37	90
Hispanics	62	74	88	47	08	47
Total Minority	147	199	201	178	246	181
Women	146	13	230	14	403	15
Total Professionals*	83,610	1,068	92,150	930	104,928	1,029

* Including Partners

SOURCE: Survey of Student Demographics, 1985-86 and 1986-87, American Assembly of Collegiate Schools of Business

TABLE 3-14

RACIAL/ETHNIC STATUS OF U.S. CITIZENS ENROLLED AND GRADUATING FROM U.S. BUSINESS SCHOOLS, FALL 1985 AND FALL 1986

(All Degree Levels Combined)

ENROLLMENT	FALL 1985	FALL 1986
White	86.0%	87.6%
Black	8.2%	6.2%
Hispanic American	2.8%	3.0%
Asian American	2.1%	2.7%
American Indian	0.7%	0.3%
Totals	99.8%	99.8%
GRADUATES		
White	89.8%	90.2%
Black	4.7%	4.3%
Hispanic American	2.5%	2.4%
Asian American	2.3%	2.5%
American Indian	0.4%	0.2%
Totals	99.7%	99.6%

FIELD: Business and Management

SOURCE: Earned Degrees Conferred, 1971 through 1987, National Center for Education Statistics

TABLE 3-15

DEGREES IN BUSINESS MANAGEMENT BY SEX AND LEVEL, 1970-71 - 1986-87

YEAR	BACHELORS			MASTERS			DOCTORATES		
	Both Sexes	Women Only	% Women	Both Sexes	Women Only	% Women	Both Sexes	Women Only	% Women
1970-71	116,709	10,803	9.3	26,654	1,045	3.9	810	23	2.8
1971-72	123,306	11,966	9.7	30,511	1,207	4.0	902	20	2.2
1972-73	128,244	13,840	10.8	31,239	1,522	4.9	932	53	5.7
1973-74	133,905	17,481	13.1	32,820	2,161	6.6	983	50	5.1
1974-75	135,455	22,223	16.4	36,450	3,080	8.4	1011	41	4.1
1975-76	145,035	28,783	19.8	42,728	4,974	11.6	956	52	5.4
1976-77	152,088	35,583	23.4	46,545	6,664	14.3	869	55	6.3
1977-78	163,274	44,604	27.3	48,661	8,216	16.9	867	72	8.3
1978-79	175,420	53,875	30.7	50,646	9,698	19.1	863	101	11.7
1979-80	189,224	63,883	33.8	55,322	12,355	22.3	796	115	14.4
1980-81	200,876	73,806	36.7	58,018	14,513	25.0	845	125	14.8
1981-82	215,817	84,718	39.3	61,428	17,069	27.8	857	152	17.7
1982-83	220,078	90,606	41.2	65,245	18,838	28.9	809	136	16.8
1983-84	222,753	95,325	42.8	66,594	20,062	30.1	976	201	20.6
1984-85	225,513	100,110	44.4	67,461	20,869	30.9	864	146	16.9
1985-86	230,784	103,947	45.0	66,967	20,795	31.1	965	206	21.3
1986-87	233,719	106,969	45.8	67,353	22,216	33.0	1098	259	23.6
TOTALS	3,012,200	958,522	31.8	854,642	185,284	21.7	15,403	1,807	11.7

SOURCE: MINORITY MBA, 1989

TABLE 3-16

FULL TIME GRADUATE ENROLLMENT IN BUSINESS, BY SEX AND MINORITY STATUS, 1986-87

CATEGORY	# of SCHOOLS	TOTAL	MEN	WOMEN 31.0%	BLACK 6.2%	HISPANIC 3.0%	OTHER 3.0%	WHITE 87.6%
Top 21 Universities	21	14,649	9,970	4,679	908	470	470	12,832
Historically Black Colleges	23	1,308	891	417	1,308*	—	—	—
Add'l Colleges with High Black Enrollment	20	6,148	4,096	2,042	380	185	185	5,385
Add'l Colleges with High Hispanic Enrollment	13	3,344	2,101	1,253	205	133	102	2,922
TOTALS	77	25,449	17,058	8,391	2,801	788	757	21,139

TOTAL: Business graduate population, full-time students only (Women, Black, Hispanic, Other) 12,737+

* Represents 100% Black student population

+ Does not include undergraduate distribution at Historically Black Colleges and part-time students at "Additional" colleges

FIELD: Business and Management

SOURCE: STAT Sheet, 1984, American Assembly of Collegiate Schools of Business, and personal communication, 1987.

TABLE 3-17

BUSINESS FACULTY MEMBERS AT AACSB MEMBER SCHOOLS BY SEX AND ETHNICITY, 1983-84 - 1985-86

(Percent)

	1984	1985	1986
Male	85.4		
Female	14.6		
White	88.7	87.8	87.3
Black	2.2	2.6	2.1
Hispanic	0.6	0.7	0.8
Asian	3.6	4.5	5.0
American Indian	0.2	0.1	0.1
Foreign	4.7	4.0	4.5
Female (New Hires)	23.3		

FIELD: Law

SOURCE: A Review of Legal Education in the United States: Fall 1978 through Fall 1987, American Bar Association Section of Legal Education and Admission to the Bar, copyright© by the American Bar Association

TABLE 3-18

NUMBER OF TEACHERS IN ABA-APPROVED LAW SCHOOLS BY SEX AND MINORITY STATUS SELECTED YEARS, FALL 1977 - FALL 1987

FALL OF	Full-Time					Part-Time					Teaching Deans					TOTAL				
YEAR	Total	Women	%W	Min	%M	Total	Women	%W	Min	%M	Total	Women	%W	Min	%M	Total	Women	%W	Min	%M
1977	3,875	411	10.6			2,156	230	10.7			344	32	9.3			6,375	673	10.6		
1980	4,225	517	12.2			2,255	205	9.1			465	96	20.6			6,945	818	11.8		
1982	4,476	661	14.8			2,514	306	12.2			491	107	21.8			7,481	1,074	14.4		
1983	4,451	712	16.0			2,530	337	13.3			503	121	24.1			7,484	1,170	15.6		
1986	4,915	1,004	20.4	312	6.3	2,940	539	18.3	149	5.1	907	358	39.5	86	9.5	8,762	1,901	21.7	547	6.2
1987	4,973	1,080	21.7	306	6.2	3,082	577	18.7	146	4.7	998	411	41.2	81	8.1	9,053	2,068	22.8	533	5.9
OTAL	26,915	4,385	16.3	618	6.3	15,477	2,194	14.2	295	4.9	3,708	1,125	30.3	167	8.8	46,100	7,704	16.7	1,080	6.1

FIELD: Law

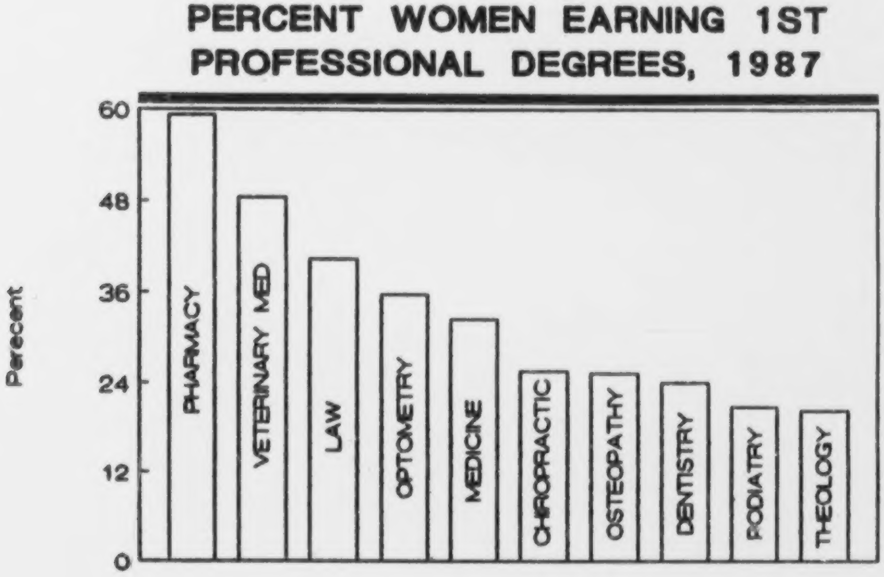
SOURCE: Earned Degrees Conferred, 1971 through 1987, National Center for Education Statistics

TABLE 3-19

DEGREES IN LAW BY SEX AND LEVEL, 1970-71 - 1986-87

YEAR	BACHELORS Both Sexes	 Women Only	 % Women	MASTERS Both Sexes	 Women Only	 % Women	DOCTORATES Both Sexes	 Women Only	 % Women
1970-71	545	27	5.0	955	46	4.8	20	0	0.0
1971-72	503	33	6.6	932	54	5.8	40	1	2.5
1972-73	474	40	8.4	1,071	80	7.5	37	1	2.7
1973-74	494	52	10.5	1,181	84	7.1	27	1	3.7
1974-75	436	62	14.2	1,245	100	8.0	21	0	0.0
1975-76	531	100	18.8	1,442	173	12.0	76	3	3.9
1976-77	559	154	27.5	1,574	208	13.2	60	8	13.3
1977-78	653	187	28.6	1,786	261	14.6	39	5	12.8
1978-79	678	274	40.4	1,647	255	15.5	46	7	15.2
1979-80	683	311	45.5	1,817	286	15.7	40	4	10.0
1980-81	776	388	50.0	1,832	326	17.8	60	4	6.7
1981-82	846	430	50.8	1,892	383	20.2	22	2	9.1
1982-83	1,099	642	58.4	2,091	488	23.3	72	17	23.6
1983-84	1,272	739	58.1	1,802	415	23.0	121	21	17.4
1984-85	1,157	708	61.2	1,796	419	23.3	105	17	16.2
1985-86	1,197	778	65.0	1,924	483	25.1	54	6	11.1
1986-87	1,178	808	68.6	1,943	520	26.8	120	41	34.2
TOTALS	13,081	5,733	43.8	26,930	4,581	17.0	960	138	14.4

CHART 3-1


PERCENT WOMEN EARNING 1ST PROFESSIONAL DEGREES, 1987

Source: NCES

Graph by CPST

FIELD: Law

SOURCE: A Review of Legal Education in the United States - Fall 1977 and Fall 1987, American Bar Association Section of Legal Education and Admission to the Bar©, American Bar Assocation.

TABLE 3-20

FIRST YEAR AND TOTAL ENROLLMENTS IN ABA APPROVED LAW SCHOOLS BY SEX AND ETHNICITY, SELECTED YEARS 1969-70 - 1987-88

		TOTAL	WOMEN		BLACK		HISPANIC*		ASIAN/PACIFIC ISLANDER		AM. INDIAN/ ALASKAN NATIVE	
YEAR		NO.	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
1969-70	First	29,128	2,103	7.22	1,115	3.83	309	1.06	*		44	0.15
	Total	68,386	4,715	6.89	2,128	3.11	548	0.80			72	0.11
1971-72		36,171	4,326	11.96	1,716	4.74	526	1.45	254	0.70	71	0.20
		94,468	8,914	9.44	3,744	4.02	1,156	1.24	480	0.52	140	0.15
1973-74		37,108	7,464	20.11	1,943	5.25	729	1.97	327	0.88	109	0.29
		106,102	16,760	15.80	4,817	4.54	1,700	1.60	850	0.80	222	0.21
1975-76		39,038	10,472	26.83	2,045	5.24	818	2.10	436	1.12	118	0.30
		116,991	26,737	22.85	5,127	4.38	2,182	1.87	1,099	0.94	295	0.25
1976-77		39,996	11,354	28.39	2,128	5.32	953	2.38	484	1.21	133	0.33
		117,451	29,538	29.15	5,503	4.69	2,461	2.10	1,324	1.13	301	0.26
1977-78		39,676	11,928	30.06	1,945	4.90	983	2.48	509	1.28	137	0.35
		118,557	32,538	27.45	5,304	4.48	2,531	2.13	1,382	1.67	363	0.31
1978-79		40,479	13,324	32.92	2,021	5.00	1,078	2.66	557	1.38	145	0.36
		121,606	36,808	30.27	5,350	4.40	2,788	2.29	1,424	1.17	390	0.32
1979-80		40,717	13,490	33.13	2,002	4.92	1,075	2.64	577	1.42	171	0.42
		122,860	38,627	31.43	5,257	4.28	2,817	2.29	1,547	1.26	392	0.32
1980-81		42,296	15,272	36.11	2,144	5.07	1,176	2.78	641	1.52	163	0.39
		125,397	42,122	33.59	5,506	4.39	3,014	2.40	1,641	1.31	415	0.33
1981-82		42,521	15,811	37.18	2,238	5.26	1,266	2.98	650	1.52	160	0.38
		127,312	44,092	35.26	5,789	4.54	3,189	2.50	1,755	1.38	402	0.32
1982-83		42,034	16,136	38.39	2,217	5.27	1,319	3.14	731	1.74	154	0.37
		127,828	47,083	36.83	5,852	4.58	3,406	2.66	1,947	1.52	406	0.32
1983-84		41,159	16,049	38.99	2,247	5.46	1,266	3.08	711	1.73	169	0.41
		127,195	41,159	32.36	5,967	4.69	3,496	2.75	1,962	1.54	441	0.35
1984-85		40,747	16,236	39.85	2,214	5.43	1,276	3.13	766	1.88	173	0.42
		125,698	48,499	38.58	5,955	4.74	3,507	2.79	2,062	1.61	429	0.34
1985-86		40,796	16,510	40.47	2,183	5.35	1,369	3.36	799	1.96	183	0.45
		124,092	49,050	39.53	6,501	5.24	3,679	2.96	2,153	1.74	463	0.37
1986-87		40,195	16,491	41.03	2,159	5.37	1,474	3.67	929	2.31	176	0.44
		123,277	49,522	40.17	5,894	4.78	3,865	3.14	2,303	1.87	488	0.40
1987-88		41,055	17,506	42.64	2,339	5.70	1,513	3.69	1,064	2.59	189	0.46
		123,198	50,460	40.96	6,029	4.89	3,018	2.45	2,656	2.16	492	0.40

*Excludes University of Puerto Rico.

SOURCE: Office of Personnel Management, unpublished tabulations

TABLE 3-21

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN LEGAL & KINDRED OCCUPATIONS BY OCCUPATION TITLE, SEX AND MINORITY STATUS, SEPT 30, 1988

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		ASIAN		AM. INDIAN		WHITE	
	TOTAL	WOMEN	% W	TOTAL	%	WOMEN	% W	No.	% B	No.	% H	No.	% A	No.	% I	No.	% W
Law Clerk	494	246	49.8	86	17.4	49	57.0	59	11.9	17	3.4	10	2.0	0	0.0	408	82.6
General Attorney	19691	6330	32.1	1923	9.8	827	43.0	1192	6.1	458	2.3	229	1.2	44	0.2	17768	90.2
Administrative Law Judge	1022	43	4.2	60	5.9	9	15.0	29	2.8	25	2.4	3	0.3	3	0.3	962	94.1
Patent Administration	67	6	9.0	5	7.5	2	40.0	3	4.5	1	1.5	1	1.5	0	0.0	62	92.5
Patent Adviser	36	2	5.6	2	5.6	1	50.0	2	5.6	0	0.0	0	0.0	0	0.0	34	94.4
Patent Attorney	234	7	3.0	8	3.4	1	12.5	4	1.7	1	0.4	2	0.9	1	0.4	226	96.6
Patent Classifying	65	8	12.3	16	24.6	4	25.0	9	13.8	2	3.1	4	6.2	1	1.5	49	75.4
Patent Examining	1490	271	18.2	298	20.0	91	30.5	137	9.2	27	1.8	132	8.9	2	0.1	1192	80.0
Design Patent Examining	26	9	34.6	8	30.8	4	50.0	5	19.2	1	3.8	2	7.7	0	0.0	18	69.2
TOTALS	23125	6922	29.9	2406	10.4	988	41.1	1440	6.2	532	2.3	383	1.7	51	0.2	20719	89.6

TABLE 4-1

YEARS OF SCHOOL COMPLETED BY PERSONS AGE 18 AND OVER BY AGE, SEX, AND RACE/ETHNICITY, 1986

(In thousands)

Age, sex, and race	Total population[1]	Elementary level		High school		College		
		Less than 8 years	8 years	1 to 3 years	4 years	1 to 3 years	4 years	5 years or more
1	2	3	4	5	6	7	8	9
Total								
18 and over	173,718	11,207	9,306	22,230	68,466	32,065	18,366	12,078
18 and 19 years old	7,164	87	142	2,374	3,594	962	5	—
20 to 24 years old	19,948	366	354	2,373	8,535	6,373	1,659	288
25 years old and over	146,606	10,757	8,810	17,482	56,338	24,729	16,702	11,787
25 to 29 years old	21,619	538	341	2,119	9,116	4,665	3,443	1,398
30 to 34 years old	20,434	548	320	1,677	8,195	4,439	3,224	2,029
35 to 39 years old	18,342	608	410	1,447	6,964	4,011	2,772	2,131
40 to 49 years old	25,980	1,172	910	2,879	10,685	4,532	2,934	2,872
50 to 59 years old	22,060	1,798	1,374	3,158	9,018	3,076	1,980	1,662
60 to 69 years old	20,263	2,479	2,127	3,291	7,622	2,298	1,366	1,100
70 years old and over	17,908	3,616	3,328	2,906	4,739	1,717	993	609
Men								
18 and over	82,827	5,537	4,424	10,387	30,072	15,361	9,708	7,330
18 and 19 years old	3,536	61	80	1,334	1,629	428	4	—
20 to 24 years old	9,788	212	184	1,189	4,183	3,078	786	155
25 years old and over	69,503	5,265	4,160	7,871	24,260	11,855	8,916	7,175
25 to 29 years old	10,751	296	174	1,048	4,491	2,276	1,688	778
30 to 34 years old	10,205	285	187	839	3,868	2,212	1,650	1,165
35 to 39 years old	9,034	331	209	704	2,971	2,046	1,539	1,234
40 to 49 years old	12,657	608	496	1,359	4,514	2,206	1,641	1,834
50 to 59 years old	10,547	954	716	1,410	3,773	1,436	1,157	1,101
60 to 69 years old	9,277	1,263	1,049	1,430	3,004	1,063	763	716
70 years old and over	7,032	1,530	1,329	1,079	1,640	625	477	350
Women								
18 and over	90,889	5,671	4,882	11,843	38,393	16,705	8,658	4,748
18 and 19 years old	3,627	25	62	1,040	1,964	535	1	—
20 to 24 years old	10,160	154	170	1,185	4,351	3,296	872	133
25 years old and over	77,102	5,493	4,650	9,610	32,078	12,874	7,786	4,613
25 to 29 years old	10,868	242	167	1,071	4,624	2,389	1,756	620
30 to 34 years old	10,229	263	133	838	4,328	2,227	1,574	864
35 to 39 years old	9,308	277	201	743	3,993	1,965	1,233	897
40 to 49 years old	13,323	564	414	1,520	6,171	2,325	1,293	1,038
50 to 59 years old	11,513	845	658	1,749	5,245	1,642	823	561
60 to 69 years old	10,986	1,216	1,078	1,861	4,618	1,235	583	384
70 years old and over	10,876	2,086	1,999	1,827	3,099	1,092	516	259
White[2]								
18 and over	149,908	8,597	8,175	18,108	59,792	27,907	16,378	10,932
18 and 19 years old	5,916	76	108	1,886	3,031	811	4	—
20 to 24 years old	16,702	312	306	1,840	7,101	5,387	1,807	247
25 years old and over	127,290	8,209	7,780	14,382	49,660	21,709	14,568	10,685
25 to 29 years old	18,225	473	300	1,693	7,621	3,850	3,034	1,256
30 to 34 years old	17,348	463	247	1,267	6,932	3,803	2,795	1,840
35 to 39 years old	15,721	511	357	1,087	5,930	3,495	2,433	1,908
40 to 49 years old	22,409	926	753	2,257	9,414	3,929	2,570	2,582
50 to 59 years old	19,298	1,302	1,148	2,582	8,100	2,821	1,804	1,513
60 to 69 years old	18,113	1,761	1,884	2,843	7,151	2,156	1,278	1,034
70 years old and over	16,182	2,743	3,092	2,652	4,613	1,665	864	571
Black[2]								
18 and over	18,941	2,126	938	3,689	7,141	3,271	1,178	598
18 and 19 years old	1,041	10	30	406	472	123	—	—
20 to 24 years old	2,666	42	43	472	1,248	741	104	17
25 years old and over	15,234	2,074	864	2,810	5,422	2,407	1,074	582
25 to 29 years old	2,684	36	33	378	1,282	658	258	80
30 to 34 years old	2,417	50	61	368	1,066	484	282	96
35 to 39 years old	1,974	57	35	311	849	430	173	118
40 to 49 years old	2,693	173	125	580	1,012	462	184	157
50 to 59 years old	2,224	384	181	532	711	214	101	79
60 to 69 years old	1,764	600	206	405	341	102	57	53
70 years old and over	1,476	768	203	234	179	45	20	28
Hispanic origin[3]								
18 and over	11,600	2,849	841	2,039	3,518	1,514	532	315
18 and 19 years old	639	32	21	311	225	48	1	—
20 to 24 years old	1,932	225	88	404	728	414	66	10
25 years old and over	9,030	2,594	734	1,327	2,566	1,052	464	306
25 to 29 years old	1,882	329	120	320	636	307	110	60
30 to 34 years old	1,594	333	90	258	535	216	111	62
35 to 39 years old	1,278	326	93	173	369	168	78	55
40 to 49 years old	1,734	489	152	261	515	306	38	64
50 to 59 years old	1,166	408	101	175	330	87	54	44
60 to 69 years old	793	379	102	92	151	33	23	15
70 years old and over	582	351	86	50	62	17	12	5

[1] Civilian noninstitutional population.

[2] Excludes persons of Hispanic origin.

[3] Persons of Hispanic origin may be of any race.

—Data not available.

NOTE.—Data are based on sample surveys of the civilian noninstitutional population. Although cells with fewer than 75,000 people are subject to relatively wide sampling variation, they are included in the table to permit various types of aggregations. Because of rounding, details may not add to totals.

SOURCE: "Hispanics in the U.S. Work Force," **MONTHLY LABOR REVIEW**, August 1988

TABLE 4-2

CIVILIAN POPULATION AND EMPLOYMENT BY HISPANIC ORIGIN, AGE AND SEX, 1980-87

(Numbers in thousands)

Population, employment, age, and sex	Hispanic				Non-Hispanic			
	1980	1987	Change, 1980–87		1980	1987	Change, 1980–87	
			Level	Percent			Level	Percent
Population								
Total, 16 years and older	9,598	12,867	3,269	34.1	158,148	169,885	11,739	7.4
16 to 19	1,281	1,332	51	4.0	15,262	13,274	−1,988	−13.0
20 to 24	1,564	1,910	346	22.1	19,072	17,061	−2,011	−10.5
25 to 44	4,083	6,178	2,095	51.3	58,052	69 873	11,821	20.4
45 and older	2,670	3,448	778	29.1	65,763	69,678	3,915	6.0
Men, 16 years and older	4,689	6,371	1,682	35.9	74,709	80,528	5,819	7.8
16 to 19	653	671	18	2.8	7,607	6,664	−943	−12.4
20 to 24	792	985	193	24.4	9,231	8,210	−1,021	−11.1
25 to 44	2,005	3,130	1,125	56.1	28,228	34,126	5,898	20.9
45 and older	1,238	1,586	348	28.1	29,644	31,528	1,884	6.4
Women, 16 years and older	4,909	6,496	1,587	32.3	83,439	89,357	5,918	7.1
16 to 19	628	661	33	5.3	7,655	6,610	−1,045	−13.7
20 to 24	771	925	154	20.0	9,841	8,851	−990	−10.1
25 to 44	2,078	3,048	970	46.7	29,824	35,747	5,923	19.9
45 and older	1,432	1,862	430	30.0	36,119	38,150	2,031	5.6
Employment								
Total, 16 years and older	5,527	7,790	2,263	40.9	93,776	104,651	10,874	11.6
16 to 19	500	474	−26	−5.2	7,211	6,167	−1,045	−14.5
20 to 24	998	1,273	275	27.6	13,089	12,251	−838	−6.4
25 to 44	2,749	4,444	1,695	61.7	43,976	55,839	11,863	27.0
45 and older	1,280	1,599	319	24.9	29,500	30,393	893	3.0
Men, 16 years and older	3,448	4,713	1,265	36.7	53,738	57,394	3,656	6.8
16 to 19	306	268	−38	−12.4	3,779	3,113	−666	−17.6
20 to 24	611	777	166	27.2	6,921	6,281	−640	−9.2
25 to 44	1,727	2,708	981	56.8	25,460	30,677	5,217	20.5
45 and older	803	959	156	19.4	17,579	17,323	−256	−1.5
Women, 16 years and older	2,079	3,077	998	48.0	40,038	47,257	7,219	18.0
16 to 19	193	206	13	6.7	3,432	3,054	−378	−11.0
20 to 24	387	496	109	28.2	6,168	5,970	−198	−3.2
25 to 44	1,022	1,736	714	69.9	18,516	25,162	6,646	35.9
45 and older	478	640	162	33.9	11,921	13,070	1,149	9.6

TABLE 4-3

EMPLOYED HISPANICS, 1980 AND 1987
(Numbers in Thousands)

No.	1980	1987
Total Hispanic	5,457	7,790
Mexican	3,175	4,690
Puerto Rican	600	744
Cuban	409	518
Other Hispanic	1,273	1,838

EDUCATION LEVEL
(Percent of the Population)

	Hispanic	Non-Hispanic
TOTAL	100	100
< 4 yrs of HS	50	23
4 yrs of HS	30	42
1 or more yr College	20	35

SOURCE: Digest of Education Statistics 1988, National Center for Education Statistics

TABLE 4-4

OCCUPATIONS OF EMPLOYED PERSONS AGE 16 AND OLDER, BY YEARS OF SCHOOL COMPLETED AND SEX, MARCH 1987

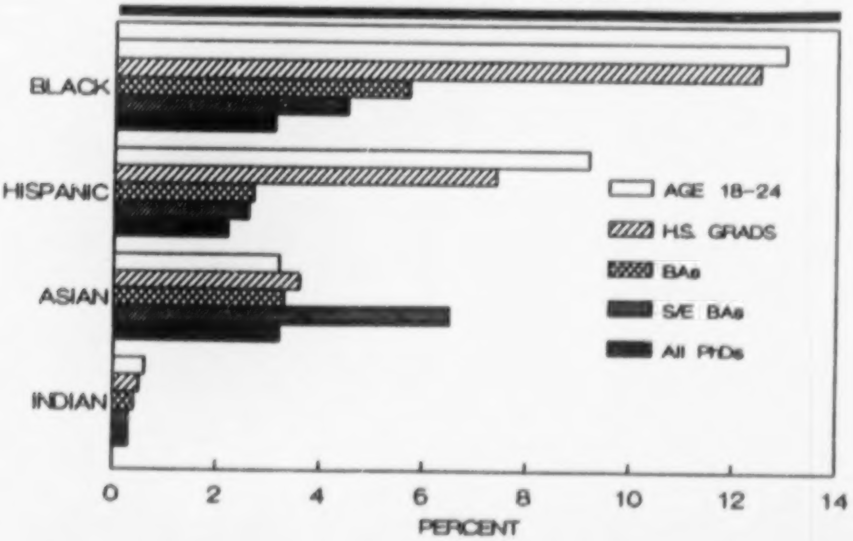
Sex and occupation	Total employed, in thousands	Percentage distribution, by years of school completed							Median school years completed
		Total	Elementary school		High school		College		
			Less than 8 years[1]	8 years	1 to 3 years	4 years	1 to 3 years	4 years or more	
1	2	3	4	5	6	7	8	9	10
All persons									
All occupational groups	109,854	100.0	2.8	2.6	11.2	40.0	20.5	22.9	12.8
Managerial and professional specialty	27,591	100.0	0.3	0.5	2.3	17.3	19.1	60.5	16.3
Technical, sales, and administrative support	34,409	100.0	0.6	0.8	7.4	46.0	27.9	17.3	12.9
Service occupations	14,833	100.0	5.3	4.2	21.1	44.6	18.7	6.1	12.4
Precision production, craft, and repair	13,162	100.0	4.1	4.2	14.2	53.4	18.2	5.8	12.5
Operators, fabricators, and laborers	16,706	100.0	6.5	5.7	21.3	50.4	12.5	3.5	12.3
Farming, forestry, and fishing	3,152	100.0	13.2	8.4	18.1	40.3	12.6	7.3	12.3
Men									
All occupational groups	60,368	100.0	3.6	3.1	11.9	37.5	19.3	24.7	12.9
Managerial and professional specialty	15,296	100.0	0.4	0.6	2.6	15.3	16.9	64.3	16.4
Technical, sales, and administrative support	12,031	100.0	0.8	1.1	6.8	35.1	29.0	27.1	13.7
Service occupations	5,962	100.0	5.7	3.7	19.6	39.9	22.7	8.3	12.6
Precision production, craft, and repair	12,056	100.0	4.1	4.2	14.2	53.4	18.5	5.6	12.5
Operators, fabricators, and laborers	12,359	100.0	6.3	5.4	21.1	50.0	13.6	3.7	12.3
Farming, forestry, and fishing	2,664	100.0	14.2	8.7	18.2	39.6	12.0	7.3	12.3
Women									
All occupational groups	49,486	100.0	1.9	1.9	10.4	43.2	22.0	20.6	12.8
Managerial and professional specialty	12,295	100.0	0.1	0.3	2.0	19.9	21.9	55.7	16.2
Technical, sales, and administrative support	22,378	100.0	0.4	0.6	7.7	51.9	27.4	12.0	12.8
Service occupations	8,871	100.0	5.1	4.6	22.0	47.8	16.0	4.6	12.4
Precision production, craft, and repair	1,108	100.0	3.9	4.6	14.1	53.9	15.1	8.5	12.4
Operators, fabricators, and laborers	4,347	100.0	7.3	6.7	21.8	51.8	9.5	2.9	12.2
Farming, forestry, and fishing	487	100.0	8.2	7.2	17.5	43.9	15.6	7.6	12.4

[1] Includes persons reporting no school years completed.

NOTE.—Because of rounding, details may not add to totals.

CHART 4-1

% US MINORITIES IN VARIOUS POPULATION GROUPS



Source: NCES & Census

Graph by CPST (1B1D1-14A)

Source: Digest of Education Statistics 1988 (CS 88-600), National Center for Education Statistics

TABLE 4-5

YEARS OF SCHOOL COMPLETED BY PERSONS AGE 25 OR OVER AND 25 TO 29, BY RACE: 1910 TO 1986

Race, age, and date	Percent, by years of school completed			Median school years completed
	Less than 5 years of elementary school	4 years of high school or more	4 or more years of college	
1	2	3	4	5
All races				
25 and over				
1910[1]	23.8	13.5	2.7	8.1
1920[1]	22.0	16.4	3.3	8.2
1930[1]	17.5	19.1	3.9	8.4
April 1940	13.7	24.5	4.6	8.6
April 1950	11.1	34.3	6.2	9.3
April 1960	8.3	41.1	7.7	10.5
March 1970	5.3	55.2	11.0	12.2
March 1975	4.2	62.5	13.9	12.3
March 1980	3.4	68.6	17.0	12.5
March 1982	3.0	71.0	17.7	12.6
March 1985	2.7	73.9	19.4	12.6
March 1986	2.7	74.7	19.4	12.6
25 to 29				
April 1940	5.9	38.1	5.9	10.3
April 1950	4.6	52.8	7.7	12.1
April 1960	2.8	60.7	11.0	12.3
March 1970	1.1	75.4	16.4	12.6
March 1975	1.0	83.1	21.9	12.8
March 1980	0.8	85.4	22.5	12.9
March 1982	0.8	86.2	21.7	12.8
March 1985	0.7	86.1	22.2	12.9
March 1986	0.9	86.1	22.4	12.9
White[2]				
25 and over				
April 1940	10.9	26.1	4.9	8.7
April 1950	8.9	36.4	6.6	9.7
April 1960	6.7	43.2	8.1	10.8
March 1970	4.2	57.4	11.6	12.2
March 1975	3.3	64.5	14.5	12.4
March 1980	2.6	70.5	17.8	12.5
March 1982	2.4	72.8	18.5	12.6
March 1985	2.2	75.5	20.0	12.7
March 1986	2.2	76.2	20.1	12.7
White[2] (continued)				
25 to 29				
1920[1]	12.9	22.0	4.5	8.5
April 1940	3.4	41.2	6.4	10.7
April 1950	3.3	56.3	8.2	12.2
April 1960	2.2	63.7	11.8	12.3
March 1970	0.9	77.8	17.3	12.6
March 1975	1.0	84.4	22.8	12.8
March 1980	0.8	86.9	23.7	12.9
March 1982	0.8	86.9	22.7	12.9
March 1985	0.8	86.8	23.2	12.9
March 1986	0.9	86.5	23.5	12.9
Black and other races[2]				
25 and over				
April 1940	41.8	7.7	1.3	5.7
April 1950	32.6	13.7	2.2	6.9
April 1960	23.5	21.7	3.5	8.2
March 1970	14.7	36.1	6.1	10.1
March 1975	11.7	46.4	9.2	11.4
March 1980	8.8	54.6	11.1	12.2
March 1982	7.4	58.1	12.4	12.3
March 1985	6.0	63.2	15.4	12.4
March 1986	5.5	65.3	15.2	12.4
25 to 29				
1920[1]	44.6	6.3	1.2	5.4
April 1940	27.0	12.3	1.6	7.1
April 1950	16.1	23.6	2.8	8.7
April 1960	7.2	38.6	5.4	10.8
March 1970	2.2	58.4	10.0	12.2
March 1975	0.7	73.8	15.4	12.6
March 1980	1.0	77.0	15.2	12.7
March 1982	0.7	82.2	15.8	12.8
March 1985	0.5	82.4	16.7	12.8
March 1986	0.9	84.3	16.3	12.8

[1] Estimates based on retrojection, by the Bureau of the Census, of 1940 census data on education by age.

[2] Persons of Hispanic origin are included, as appropriate, in the "white" or in the "black and other races" category.

NOTE.—Data for 1975 and subsequent years are for the noninstitutional population. Some data have been revised from previously published figures.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *U.S. Census of Population, 1980, Vol. 1; Current Population Reports*, Series P-20; Series P-19, No. 4; 1960 Census Monograph, *Education of the American Population*, by John K. Folger and Charles B. Nam; and unpublished data. (This table was prepared August 1987.)

Source: Digest of Education Statistics 1988 (CS 88-600), National Center for Education Statistics

TABLE 4-6

PERSONS AGE 18 AND OVER WHO HOLD A BACHELOR'S OR HIGHER DEGREE, BY FIELD, SEX, RACE AND AGE, SPRING 1984

Field of study	Total	Sex		Race		Age					
		Men	Women	White	Black	18 to 24 years old	25 to 34 years old	35 to 44 years old	45 to 54 years old	55 to 64 years old	65 years old and over
1	2	3	4	5	6	7	8	9	10	11	12
Total population, 18 and over	**170,232**	**80,834**	**89,398**	**147,147**	**18,475**	**28,494**	**40,474**	**30,480**	**22,264**	**22,060**	**26,458**
Number of persons with bachelor's or higher degree	26,381	14,711	11,670	24,036	1,334	2,036	8,595	7,057	3,474	2,812	2,401
Percent of population	15.5	18.2	13.1	16.3	7.2	7.1	21.2	23.2	15.6	12.7	9.1
Agriculture and forestry	427	389	38	419	—	22	155	101	45	70	34
Biology	620	322	298	556	21	62	271	117	77	53	38
Business and management	4,462	3,346	1,116	4,058	238	504	1,490	1,303	581	385	198
Economics	462	391	71	403	23	43	150	118	72	53	24
Education	5,297	1,514	3,783	4,890	347	155	1,466	1,689	743	566	667
Engineering	2,176	2,000	176	1,952	72	286	581	477	322	317	182
English and journalism	1,029	406	623	975	35	97	285	213	146	145	144
Home economics	366	21	345	330	23	9	110	66	25	90	65
Law	928	777	151	860	45	24	273	335	139	93	64
Liberal arts and humanities	2,371	979	1,392	2,215	73	235	784	517	286	227	323
Mathematics and statistics	541	351	190	488	33	35	200	128	90	62	26
Medicine and dentistry	872	707	165	776	32	27	289	251	107	140	81
Nursing, pharmacy, and health technologies	1,151	194	957	997	57	79	433	281	168	110	76
Physical and earth sciences	741	553	188	669	17	60	236	189	113	66	78
Police science and law enforcement	154	113	41	140	14	15	59	71	—	10	—
Psychology	749	294	455	707	27	69	281	198	89	59	53
Religion and theology	467	402	65	445	18	17	114	77	103	59	96
Social sciences	1,764	840	924	1,560	156	134	731	486	143	158	113
Vocational and technical studies	157	142	15	138	15	13	69	26	21	18	10
Other fields	1,647	970	677	1,458	88	155	629	402	204	131	126
	Percentage distribution of degree holders, by field										
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Agriculture and forestry	1.6	2.6	0.3	1.7	—	1.1	1.8	1.4	1.3	2.5	1.4
Biology	2.4	2.2	2.6	2.3	1.6	3.0	3.2	1.7	2.2	1.9	1.6
Business and management	16.9	22.7	9.6	16.9	17.8	24.8	17.3	18.5	16.7	13.7	8.2
Economics	1.8	2.7	0.6	1.7	1.7	2.1	1.7	1.7	2.1	1.9	1.0
Education	20.1	10.3	32.4	20.3	26.0	7.6	17.1	24.1	21.4	20.1	27.8
Engineering	8.2	13.6	1.5	8.1	5.4	14.0	6.9	6.8	9.3	11.3	7.6
English and journalism	3.9	2.8	5.3	4.1	2.6	4.8	3.3	3.0	4.2	5.2	6.0
Home economics	1.4	0.1	3.0	1.4	1.7	0.4	1.3	0.9	0.7	3.2	2.7
Law	3.5	5.3	1.3	3.6	3.4	1.2	3.2	4.7	4.0	3.3	2.7
Liberal arts and humanities	9.0	6.7	11.9	9.2	5.5	11.5	9.1	7.3	8.2	8.1	13.5
Mathematics and statistics	2.1	2.4	1.6	2.0	2.5	1.7	2.3	1.8	2.6	2.2	1.1
Medicine and dentistry	3.3	4.8	1.4	3.2	2.4	1.1	3.1	3.6	3.1	5.0	3.4
Nursing, pharmacy, and health technologies	4.4	1.3	8.2	4.1	4.3	3.9	5.0	4.0	4.8	3.9	3.2
Physical and earth sciences	2.8	3.8	1.6	2.8	1.3	2.9	2.7	2.7	3.3	2.3	3.2
Police science and law enforcement	0.6	0.8	0.4	0.6	1.0	0.7	0.7	1.0	—	0.4	—
Psychology	2.8	2.0	3.9	2.9	2.0	3.4	3.3	2.8	2.6	2.1	2.2
Religion and theology	1.8	2.7	0.6	1.9	1.3	0.8	1.3	1.1	3.0	2.1	4.0
Social sciences	6.7	5.7	7.9	6.5	11.7	6.6	8.5	6.9	4.1	5.6	4.7
Vocational and technical studies	0.6	1.0	0.1	0.6	1.1	0.6	0.8	0.4	0.6	0.6	0.4
Other fields	6.2	6.6	5.8	6.1	6.6	7.6	7.3	5.7	5.9	4.7	5.2

— Data not available or not applicable.

NOTE. – Data are based on sample surveys of the civilian noninstitutional population. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-70, No. 11, *Educational Background and Economic Status: Spring 1984*. (This table was prepared October 1987.)

SOURCE: Employment and Earnings, January 1989, Bureau of Labor Statistics

TABLE 4-7

EMPLOYED PERSONS BY DETAILED OCCUPATION, SEX AND RACE, 1988

(Numbers in thousands)

Occupation	Total Employed	Percent of Total		
		Women	Black	Hispanic Origin
Total, 16 years and over	**114,968**	**45.0**	**—10.1**	**— 7.2**
Managerial & Professional Specialty	**29,190**	**44.7**	**6.1**	**3.7**
Executive, administrative and managerial	14,216	39.3	5.6	4.0
Officials ,adminis., publ. admin.	472	44.5	9.4	4.1
Financial managers	502	42.4	4.3	4.1
Administrators, Protective Services	56	17.8	4.4	3.1
Personnel and labor relations mgrs.	130	49.1	5.5	3.1
Purchasing managers	99	24.4	5.6	2.8
Mgrs., market., advertis. & publ. rel.	482	32.0	3.6	2.6
Administrators, educ. & rel. fields	562	48.9	9.5	1.9
Mgrs., medicine & health	163	61.3	6.3	1.8
Mgrs, properties & real estate	433	44.8	6.2	6.6
Management-related occupations	3,772	50.6	7.2	4.2
Accountants & auditors	1,329	49.6	7.5	3.7
Underwriters & other financial officers	741	50.7	5.4	4.8
Management analysts	199	33.0	4.9	2.0
Personnel, training & labor rel. spec.	390	58.9	9.4	4.8
Buyers, wholesale & retail, exc. farm prod.	233	50.4	3.4	5.5
Construction inspectors	60	5.4	7.1	3.5
Inspectors & compliance off., exc. constr.	194	26.8	12.0	8.0
Professional specialty	**14,974**	**49.8**	**6.7**	**3.4**
Architects	143	14.6	4.4	6.3
Engineers	1,805	7.3	3.8	2.8
Aerospace	115	6.3	5.4	.8
Chemical	65	12.0	2.7	2.1
Civil	218	6.0	3.7	5.9
Electrical & electronic	573	7.9	3.7	2.5
Industrial	221	12.9	56.0	1.2
Mechanical	297	3.7	2.9	2.6
Mathematical & computer scientists	732	33.4	7.4	3.0
Computer systems analysts & scientists	479	29.5	7.4	2.6
Operations & sys. researchers & analysts	210	39.6	6.4	4.0
Natural scientists	395	24.1	2.5	2.8
Chemists, exc. biochemists	125	23.7	4.1	2.0
Geologists & geodesists	50	12.6	.8	2.0
Biological & life scientists	75	39.7	1.0	2.4

Occupation	Total Employed	Percent of Total		
		Women	Black	Hispanic Origin
Professional specialty continued				
Health diagnosing occupations	818	18.2	2.8	4.0
Physicians	541	20.0	3.3	4.7
Dentists	152	9.3	1.9	3.0
Health assessment & treating occup.	2,154	84.9	7.8	2.9
Registered nurses	1,559	94.6	8.5	2.7
Pharmacists	168	31.9	2.7	1.1
Dietitians	74	86.0	18.8	4.7
Therapists	298	73.0	4.9	4.0
Inhalation	65	54.0	7.6	4.6
Physical	82	73.5	2.1	6.1
Speech	66	90.2	3.9	--
Teachers, college & university	700	38.5	4.0	3.6
Teachers, exc. college & university	3,773	72.9	8.8	3.9
Prekindergarten & kindergarten	393	98.2	9.2	6.3
Elementary school	1,424	84.8	10.2	3.9
Secondary school	1,187	51.2	8.1	3.7
Special education	246	85.2	10./6	1.0
Teachers, n.e.c.	524	65.2	5.5	3.7
Counselors, educational & vocational	206	61.8	14.9	4.6
Librarians, archivists & curators	219	82.6	8.0	1.5
Librarians	196	85.4	7.8	1.6
Social scientists & urban planners	343	47.6	7.1	3.9
Economists	116	35.3	6.1	4.0
Psychologists	196	55.8	7.8	4.0
Social, recreation & religious workers	1,052	46.1	13.9	4.8
Social workers	537	66.0	19.3	6.2
Recreation workers	92	64.2	12.3	5.1
Clergy	348	8.8	8.6	2.7
Religious workers, n.e.c.	75	54.9	1.2	3.6
Lawyers and judges	757	19.5	2.3	1.9
Lawyers	724	19.3	2.0	1.9
Writers, artists, entertainers & athletes	1,855	46.7	4.3	3.6
Authors	82	56.0	.4	.7
Technical writers	58	47.4	2.6	1.6
Designers	510	53.3	2.1	3.6
Musicians and composers	151	29.6	7.7	7.2
Actors and directors	100	37.5	5.6	2.7

SOURCE: Employment and Earnings, January 1989, Bureau of Labor Statistics

TABLE 4-7 (continued)

EMPLOYED PERSONS BY DETAILED OCCUPATION, SEX AND RACE, 1988

(Numbers in thousands)

Occupation	Total Employed	Percent of Total Women	 Black	 Hispanic Origin
Professional specialty continued				
Writers, artists, entertainers & athletes, cont.				
Painters, sculptors, craft-artists	215	51.2	3.6	4.2
Photographers	117	30.7	4.4	2.1
Editors and reporters	260	51.1	4.0	2.5
Public relations specialists	151	59.1	5.1	2.4
Announcers	52	16.1	9.2	6.2
Athletes	73	15.7	13.6	4.2
Technical, sales & admin. support	**35,532**	**64.8**	**9.1**	**5.8**
Technicians and related support	3,521	47.9	9.4	4.3
Health technologists & technicians	1,226	82.6	14.2	4.5
Clinical lab technol. & technicians	272	76.0	14.2	4.5
Dental hygienists	78	97.6	3.2	1.9
Radiologic technicians	133	76.0	4.1	5.7
Licensed practical nurses	423	96.0	19.1	3.8
Engr., related technol. & technicians	930	18.9	6.1	4.7
Electrical & electronic technicians	322	14.4	6.8	6.6
Drafting occupations	290	16.3	5.5	4.3
Surveying and mapping technitians	78	12.9	3.3	2.8
Science technicians	216	31.1	8.7	3.9
Biological technicians	55	42.5	9/2	5/1
Chemical technicians	81	26.8	10.0	3.1
Technicians, exc. health, engr. & sci.	1,149	37.7	6.9	3.9
Airplane pilots & navigators	88	3.1	1.4	1.5
Computer programmers	570	32.2	6.9	3.8
Legal assistants	203	76.3	8.2	6.0
Sales occupations	**13,747**	**48.9**	**6.1**	**5.3**
Supervisors and proprietors	3,658	33.5	4.3	4.8
Sales reps, finance, business and services	2,410	41.2	4.0	3.4
Insurance sales	545	29.7	4.5	4.3
Real estate sales	792	48.5	3.2	2.6
Securities and financial services sales	319	27.5	2.5	2.3
Advertising and related sales	168	47.8	6.4	3.3
Sales occupations, other business serv.	585	47.4	4.9	4.2
Sales reps, commodities, exc. retail	1,551	19.2	3.1	3.7
Sales workers, retail and personal services.	6,068	68.6	8.9	6.8
Administrative support, incl. clerical	**18,264**	**80.1**	**11.3**	**6.5**
Supervisors	764	58.0	13.5	5.9
General office	458	67.7	13.3	6.4
Financial records processing	91	70.3	7.5	1.6
Supervisors, distr., sched. and adj. clerks	165	25.5	19.4	7.6
Computer equipment operators	869	66.1	14.4	5.9
Computer operators	865	66.0	14.3	6.0
Secretaries, stenog. and typists	4,876	98.2	8.5	5.3
Secretaries	4,030	99.1	7.1	4.8
Stenographers	48	79.9	3.2	2.2
Typists	798	94.5	16.0	7.8
Information clerks	1,479	88.5	9.1	8.5
Records processing occupations exc. financial	827	82.1	15.6	6.9
Financial records processing	2,414	91.0	6.2	5.1
Bookkeepers, accounting & auditing clerks	1,970	92.1	5.1	5.0
Communications equipment operators	218	89.4	19.3	4.5
Mail & message distr. occupations	936	36.3	22.0	8.6
Postal clerks, exc. mail carriers	313	47.6	32.1	6.2
Mail carriers, postal service	320	22.0	13.4	10.4
Mail clerks, exc. postal service	163	50.6	23.8	10.0
Messengers	141	27.6	17.3	8.2
Material recording, sched. & distr. clerks	1,681	38.4	14.0	8.5
Dispatchers	71	45.9	7.3	5.2
Production coordinators	192	45.6	9.3	6.2
Traffic, shipping & receiving clerks	521	27.5	15.9	10.5
Stock & inventory clerks	559	38.7	16.2	9.3
Expediters	95	62.8	10.2	7.9
Adjusters & investigators	949	75.0	11.3	6.0
Insurance adjust., examin. & investigators	287	72.2	10.1	4.8
Investigators & adjusters, exc. insur.	466	76.9	11.7	6.3
Eligibility clerks, social welfare	65	90.3	15.3	8.6
Bill & account collectors	130	66.6	10.5	5.9
Miscellaneous administrative support	3,183	85.0	13.1	7.0
General office clerks	833	81.3	11.3	6.8
Bank tellers	478	91.0	8.8	6.6
Data entry keyers	362	88.2	19.8	7.6
Teachers' aides	423	95.5	14.3	9.6

SOURCE: Employment and Earnings, January 1989, Bureau of Labor Statistics

TABLE 4-7 (continued)

EMPLOYED PERSONS BY DETAILED OCCUPATION, SEX AND RACE, 1988

(Numbers in thousands)

Occupation	Total Employed	Percent of Total		
		Women	Black	Hispanic Origin
Service occupations	**15,332**	**60.5**	**17.6**	**10.2**
Private household	909	96.3	22.5	16.7
Child care workers	378	967.3	8.8	9.6
Cleaners & servants	476	95.6	32.0	22.1
Protective services	1,944	14.4	16.7	6.3
Supervisors, protective service	174	7.4	15.3	3.7
Firefighting & fire prevention	218	2.9	8.3	5.8
Police & detectives	755	13.4	15.8	5.5
Police & detectives, public service	427	10.1	14.0	5.1
Sheriffs, bailiffs & other law enfor. officers	111	17.4	9.2	5.4
Correctional institution officers	217	17.8	22.8	6.4
Guards	796	20.0	20.1	7.7
Service occupations, except private household and protective service	**12,479**	**65.1**	**17.4**	**10.3**
Food preparation & service occupations	5,182	61.6	12.4	10.2
Supervisors	325	68.3	10.7	7.6
Bartenders	324	49.6	2.2	5.8
Waiters & waitresses	1,363	82.6	3.9	5.7
Cooks, except short order	1,634	49.8	18.1	11.7
Short-order cooks	95	37.5	24.7	8.4
Food counter, fountain and related occup.	325	78.3	12.5	8.0
Health service occupations	1,977	89.3	28.2	6.3
Dental assistants	165	98.7	6.8	3.9
Health aides, except nursing	407	83.7	17.9	7.5
Nursing aides, orderlies and attendants	1,404	89.8	33.7	6.2
Cleaning & building service occupations	2,994	42.6	23.0	15.2
Supervisors	159	37.6	26.8	12.5
Maids and housemen	644	85.0	29.0	18.2
Janitors and cleaners	2,133	31.2	21.1	14.6
Personal service occupations	2,327	81.1	12.0	7.8
Barbers	94	18.3	13.3	9.9
Hairdressers and cosmetologists	769	89.5	8.1	7.8
Attendants, amusement and recreation facil.	1130	40.3	6.7	4.5
Public transportation attendants	77	79.1	15.9	2.8
Welfare service aides	92	94.1	24.0	10.0
Child care workers	853	96.0	13.3	7.1
Precision production, craft & repair	**13,664**	**8.7**	**7.5**	**8.2**
Mechanics, repairers	4,454	3.3	7.1	7.8
Supervisors	247	8.1	5.0	4.3
Mechanics and repairers exc. supervisors	4,198	3.1	7.2	7.8
Vehicle & mobile equip. mechs. & repairers	1,811	.9	7.1	9.2
Automobile mechanics	879	.7	7.4	10.5
Bus, truck & stationary engine mechs.	325	.5	7.2	7.3
Aircraft engine mechanics	131	3.7	12.7	6.1
Automobile body and related repairers	194	1.0	4.8	13.3
Heavy equipment mechanics	159	.5	5.8	7.7
Industrial machinery repairers	547	2.7	8.3	7.9
Electrical & electronic equip. repairers	677	8.0	7.1	4.7
Electronic rep., commun. & indus. equipment	165	5.0	7.3	5.3
Data processing equipment repairers	140	8.8	6.7	2.6
Telephone installers and repairers	61	10.0	6.7	2.4
Heating, air cond. and refrig. mechanics	282	.6	3.7	5.5
Miscellaneous mechanics and repairers	874	4.5	8.2	7.8
Construction trades	**5,098**	**2.1**	**7.1**	**8.2**
Supervisors	617	2.2	4.2	5.4
Construction trades exc. supervisors	4,481	2.1	7.5	8.6
Brickmasons and stonemasons	202	.5	16.3	9.3
Carpet installers	108	2.3	6.2	9.2
Carpenters	1,427	1.5	5.2	8.0
Drywall installers	149	2.1	6.3	11.9
Electricians	701	1.4	4.3	5.9
Electrical power installers and repairers	101	.4	9.9	2.3
Painters, construction and maintenance	525	5.8	7.6	11.8
Plumbers, pipefitters and steamfitters	494	.4	7.9	6.7
Concrete and terrazzo finishers	85	.2	26.6	20.1
Roofers	156	1.2	10.8	9.4
Structural metal workers	48	.4	7.3	7.9
Extractive occupations	144	2.1	5.4	7.50
Precision production occupations	3,968	23.5	8.6	8.8
Supervisors	1,361	15.4	8.5	.85
Precision metalworking	924	6.3	6.0	6.8
Tool and die makers	145	2.4	2.9	3.7
Machinists	497	4.8	6.3	6.5

SOURCE: Employment and Earnings, January 1989, Bureau of Labor Statistics

TABLE 4-7 (continued)

EMPLOYED PERSONS BY DETAILED OCCUPATION, SEX AND RACE, 1988

(Numbers in thousands)

Occupation	Total Employed	Percent of Total		
		Women	Black	Hispanic Origin
Construction Trades continued				
Sheet-metal workers	126	5.7	8.0	4.4
Precision woodworking occupations	106	11.8	4.6	9.3
Precision textile, apparel, and furnishings machine workers	296	58.1	8.0	17.8
Dressmakers	126	94.4	6.8	10.4
Upholsterers	84	22.0	3.3	27.9
Precision workers, assorted materials	529	56.7	10.0	10.9
Optical goods workers	60	61.4	2.6	4.0
Dental lab. & medical appl. technicians	49	52.9	6.6	5.1
Electrical & electronic equip. assemblers	305	70.0	12.1	14.1
Precision food prod. occupations	418	32.4	14.3	12.4
Butchers and meat cutters	198	21.2	17.0	12.2
Bakers	126	47.8	10.0	11.6
Precision inspectors, testers & rel. workers	126	28.1	8.8	7.4
Plant and system operators	236	4.5	7.9	5.8
Stationary engineers	103	3.0	8.2	8.9
Operators, fabricators and laborers	17,814	25.7	15.0	11.1
Machine operators, assemblers & inspectors	8,117	40.8	14.8	13.3
Machine oper. & tenders, except precision	5,362	41.9	15.9	14.0
Metalworking & plastic working mach. operators	465	17.0	10.9	10.1
Metal & plastic processing machine oper.	170	25.6	16.3	10.4
Molding and casing machine operators	102	31.2	19.1	6.3
Woodworking machine operators	159	14.4	15.1	4.6
Printing machine operators	505	26.4	7.7	8.2
Textile, apparel & furnishings mach. oper.	1,355	78.0	21.0	19.2
Machine operators, assorted materials	2,2,680	33.5	15.6	13.9
Fabricators, assemblers, hand workers	1,906	33.0	12.0	12.0
Production inspectors, checkers & examiners	683	52.7	13.6	10.6
Transportation and material moving occupations	4,4,831	9.0	14.9	7.1
Motor vehicle operators	3,592	10.8	14.9	7.1
Truck drivers, heavy	1,826	2.3	13.8	6.0
Truck drivers, light	782	9.0	12.3	9.0
Transportation and material moving, continued				
Transportation occup. except motor vehicles	195	2.1	10.8	2.1
Drivers-sales workers	201	7.1	5.5	6.8
Bus drivers	490	48.5	23.2	6.0
Taxi-cab drivers and chauffeurs	218	12.5	23.8	11.0
Rail transportation occupations	137	2.2	12.6	2.5
Water transportation occupations	58	1.9	6.4	1.2
Material moving equip. operators	1,043	4.1	15.6	7.9
Operating engineers	210	1.3	6.9	6.0
Crane and tower operators	88	1.7	18.3	5.6
Excavating and loading machine operators	108	.7	7.7	4.9
Grader, dozer and scraper operators	92	.6	9.4	4.9
Industrial truck & tractor equipment oper.	431	5.7	22.6	10.7
Handlers, equip. cleaners, helpers and laborers	4,866	17.2	15.5	11.3
Freight, stock and material handlers	1,756	17.5	15.8	8.7
Stock handlers and baggers	891	22.8	10.7	7.4
Garage, service station related occupations	246	6.2	10.2	8.4
Vehicle washers and equipment cleaners	253	14.1	20.3	15.0
Hand packers and packagers	298	65.3	14.4	13.6
Laborers, except construction	1,248	18.6	15.4	11.5
Farming, forestry and fishing	3,437	16.3	6.6	13.0
Farm operators and managers	1,286	15.0	1.1	1.6
Farmers	1,154	15.2	.9	1.4
Farm managers	133	13.4	3.0	3.5
Other agricultural and related occupations	1,978	18.2	10.0	21.3
Farm occupations, except managerial	1,1,020	23.5	8.6	23.3
Farm workers	949	23.3	8.6	23.0
Related agricultural occupations	958	12.5	11.5	19.2
Supervisors	76	5.0	8.7	13.9
Groundskeepers and gardeners, except farm	765	5.2	12.2	20.7
Animal caretakers, except farm	101	63.4	8.3	6.3
Forestry and logging occupations	117	4.2	11.2	4.2
Timber cutting and logging	84	.5	12.1	1.6

Note: N.e.c. is an abbreviation for "not elsewhere classified" and designates broad categories of occupations which cannot be more specifically identified.

SOURCE: Characteristics of Doctoral Scientists and Engineers, 1987, National Science Foundation

TABLE 4-8

DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SEX AND RACE/ETHNICITY, 1987

	All Races			White		Black		Am. Indian		Asian		Hispanic*		Other/ no report
	Sex	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.
TOTAL	Total	451,438	100	403,421	89.4	6,691	1.5	586	0.1	37,530	8.3	7,202	1.6	3,210
ALL FIELDS	Women	73,423	16.3	66,087	16.4	2,023	30.2	132	22.5	4,802	12.8	1,290	17.9	106
PHYSICAL	Total	75,753	100	67,449	89.0	668	0.9	100	0.1	7,053	9.3	1,081	1.4	483
SCIENTISTS	Women	6,275	8.3	5,129	7.6	78	11.7	3	0.0	1,030	14.6	151	14.0	35
Chemists	Total	49,403	100	43,660	88.4	526	1.1	63	0.1	4,894	9.9	727	1.5	260
	Women	5,127	10.4	4,206	9.6	70	13.3	3	0.1	820	16.8	129	17.7	28
Physicists/	Total	26,350	100	23,789	90.3	142	0.5	37	0.1	2,159	8.2	354	1.3	223
Astronomers	Women	1,148	4.4	923	3.9	8	5.6			210	9.7	22	6.2	7
MATHEMATICAL	Total	17,788	100	15,978	89.8	169	1.0	13	0.1	1,530	8.6	271	1.5	98
SCIENTISTS	Women	1,802	10.1	1,542	9.7	35	20.7	3	0.2	213	13.9	36	13.3	9
Mathema-ticians	Total	14,795	100	13,508	91.3	149	1.0	10	0.1	1,034	7.0	243	1.6	94
	Women	1,451	9.8	1,270	9.4	30	20.1	3	0.2	143	13.8	34	14.0	5
Statis-ticians	Total	2,993	100	2,470	82.5	20	0.7	3	0.1	496	16.6	28	0.9	4
	Women	351	11.7	272	11.0	5	25.0			70	14.1	2	0.6	4
COMPUTER/INFO	Total	18,626	100	16,274	87.4	200	1.1	5	0.0	1,838	9.9	329	1.8	309
SPECIALISTS	Women	1,909	10.2	1,693	10.4	8	4.0	1	20.0	190	10.3	21	6.4	17
ENVIRONMENTAL	Total	18,985	100	17,654	93.0	224	1.2	20	0.1	993	5.2	301	1.6	94
SCIENTISTS	Women	1,447	7.6	1,324	7.5	13	5.8	4	0.3	101	10.2	25	8.3	5
Earth	Total	14,646	100	13,555	92.6	177	1.2	18	0.1	806	5.5	218	1.5	90
Scientists	Women	1,106	7.6	1,012	7.5	13	7.3	4	0.4	72	8.9	13	6.0	5
Ocean-	Total	2,095	100	1,982	94.6	2	0.1			109	5.2	54	2.6	2
ographers	Women	246	11.7	231	11.7					15	13.8	10	18.5	
Atmospheric	Total	2,244	100	2,117	94.3	45	2.0	2	0.1	78	3.5	29	1.3	2
Scientists	Women	95	4.2	81	3.8					14	17.9	2	6.9	
LIFE	Total	117,453	100	106,466	90.6	1,577	1.3	143	0.1	8,558	7.3	1,614	1.4	729
SCIENTISTS	Women	24,787	21.1	22,084	20.7	551	34.9	50	35.0	1,998	23.3	340	21.1	103
Biological	Total	68,734	100	62,500	90.9	880	1.3	66	0.1	4,927	7.2	769	1.1	361
Scientists	Women	15,545	22.6	13,762	22.0	288	32.7	28	42.4	1,392	28.3	173	22.5	76
Agricultural	Total	17,831	100	16,414	92.1	190	1.1	36	0.2	1,084	6.1	380	2.1	103
Scientists	Women	1,211	6.8	1,066	6.5	20	10.5	2	5.6	121	11.2	42	11.1	2
Medical	Total	30,888	100	27,532	89.1	507	1.6	41	0.1	2,547	8.2	465	1.5	261
Scientists	Women	8,031	26.0	7,256	26.4	243	47.9	20	48.8	485	19.0	125	26.9	27
PSYCHOLO-GISTS	Total	59,432	100	56,581	95.2	1,300	2.2	115	0.2	885	1.5	1,057	1.8	551
	Women	20,299	34.2	19,036	33.6	697	53.6	37	32.2	398	45.0	404	38.2	131
SOCIAL	Total	72,275	100	65,989	91.3	1,898	2.6	153	0.2	3,722	5.1	1,403	1.9	516
SCIENTISTS	Women	15,097	20.9	13,876	21.0	585	30.9	26	17.0	545	14.6	280	20.0	66
Economists	Total	19,580	100	17,573	89.7	349	1.8	40	0.2	1,455	7.4	477	2.4	183
	Women	2,230	11.4	2,017	11.5	51	14.6	4		149	10.2	63	13.2	9
Sociologists/	Total	14,714	100	13,647	92.7	384	2.6	72	0.5	508	3.5	233	1.6	103
Anthropol.	Women	4,601	31.3	4,307	31.6	160	41.7	7	9.7	99	19.5	71	30.5	28
Other Social	Total	37,981	100	34,769	91.5	1,163	3.1	41	0.1	1,759	4.6	693	1.8	249
Scientists	Women	8,266	21.8	7,552	21.7	374	32.2	15	36.6	297	16.9	146	21.1	28
ENGINEERS	Total	71,126	100	57,050	80.2	657	0.9	37	0.1	12,951	18.2	1,146	1.6	431
	Women	1,807	2.5	1,403	2.5	56	8.5	8	21.6	327	2.5	33	2.9	13

Blanks indicate no cases reported. * Included here and in other racial groups.

Note: Top percentage in each field is percent of total. Next percentage is percent of women in that field.

SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States: 1987, National Science Foundation (NSF 88-331)

TABLE 4-9

EMPLOYED DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, YEARS OF PROFESSIONAL EXPERIENCE AND SEX, 1987

FIELD	SEX	YEARS OF PROFESSIONAL EXPERIENCE																				
		TOTAL+	1 or Less		2-4 Years		5-9 Years		10-14 Years		15-19 Years		20-24 Years		25-29 Years		30-34 Years		35-39 Years		40 or More	
		No.	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL	Total	419118	13142	3.1	54817	13.1	81958	19.6	79644	19.0	77365	18.5	48310	11.5	26240	6.3	19844	4.7	9504	2.3	1620	0.4
ALL FIELDS	Women	66732	4234	6.3	15661	23.5	19696	29.5	12524	18.8	7071	10.6	3207	4.8	1509	2.3	777	1.2	412	0.6	67	0.1
Chemists	Total	44136	993	2.2	5,176	11.7	7,098	16.1	6,803	15.4	8,184	18.5	6,437	14.6	3990	9.0	3044	6.9	1596	3.6	367	0.8
	Women	4470	263	5.9	928	20.8	1,189	26.6	758	17.0	537	12.0	304	6.8	212	4.7	94	2.1	38	0.9	14	0.3
Physicists/	Total	24511	568	2.3	2,703	11.0	3,634	14.8	3,917	16.0	4,808	19.6	4,006	16.3	1974	8.1	1773	7.2	760	3.1	153	0.6
Astronomers	Women	1014	51	5.0	227	22.4	277	27.3	215	21.2	92	9.1	50	4.9	36	3.6	19	1.[illegible]	6	0.6	5	0.5
Mathematicians	Total	13878	377	2.7	1,272	9.2	2,251	16.2	2,355	17.0	3,268	23.5	2,209	15.9	973	7.0	541	3.9	347	2.5	69	0.5
	Women	1292	79	6.1	227	17.6	292	22.6	261	20.2	193	14.9	121	9.4	41	3.2	29	2.2	10	0.8	*	
Statisticians	Total	2821	37	1.3	511	18.1	485	17.2	598	21.2	432	15.3	384	13.6	161	5.7	98	3.5	39	1.4	9	0.3
	Women	333	7	2.1	96	28.8	126	37.8	36	10.8	24	7.2	13	3.9	14	4.2	10	3.0	*		*	
Computer/Info.	Total	18571	614	3.3	2,354	12.7	4,277	23.0	4,117	22.2	3,689	19.9	1,716	9.2	755	4.1	544	2.9	182	1.0	*	
Specialists	Women	1878	66	3.5	389	20.7	721	38.4	413	22.0	160	8.5	45	2.4	14	0.7	5	0.3	2	0.1	*	
Environmental	Total	17811	469	2.6	2,060	11.6	3,379	19.0	3,781	21.2	3,195	17.9	2,196	12.3	1199	6.7	806	4.5	377	2.1	57	0.3
Scientists	Women	1301	78	6.0	327	25.1	394	30.3	246	18.9	123	9.5	65	5.0	4	0.3	17	1.3	13	1.0		0.0
Biological	Total	61985	2195	3.5	9,281	15.0	12,719	20.5	11,732	18.9	10,596	17.1	6,056	9.8	3940	6.4	3144	5.1	1283	2.1	185	0.3
Scientists	Women	13516	795	5.9	3,098	22.9	3,510	26.0	2,692	19.9	1,575	11.7	723	5.3	471	3.5	242	1.8	69	0.5	6	0.0
Agricultural	Total	15796	511	3.2	1,899	12.0	2,930	18.5	2,720	17.2	2,824	17.9	1,836	11.6	1238	7.8	1020	6.5	490	3.1	32	0.2
Scientists	Women	1078	92	8.5	347	32.2	382	35.4	131	12.2	35	3.2	33	3.1	*		11	1.0	10	0.9	*	
Medical	Total	29597	1234	4.2	4,505	15.2	6,397	21.6	5,925	20.0	4,658	15.7	2,595	8.8	1637	5.5	1293	4.4	653	2.2	154	0.5
Scientists	Women	7515	634	8.4	1,885	25.1	2,336	31.1	1,195	15.9	805	10.7	221	2.9	150	2.0	55	0.7	74	1.0	13	0.2
Psychologists	Total	56378	2212	3.9	9,262	16.4	13,668	24.2	10,900	19.3	8,182	14.5	5,088	9.0	2979	5.3	2265	4.0	768	1.4	91	0.2
	Women	19104	1056	5.5	4,646	24.3	5,912	30.9	3,476	18.2	1,989	10.4	959	5.0	328	1.7	167	0.9	101	0.5	14	0.1
Economists	Total	17837	429	2.4	2,411	13.5	3,458	19.4	3,176	17.8	3,410	19.1	2,183	12.2	1089	6.1	812	4.6	411	2.3	108	0.6
	Women	2036	81	4.0	474	23.3	550	27.0	425	20.9	287	14.1	126	6.2	41	2.0	18	0.9	17	0.8	*	
Sociologists/	Total	12933	396	3.1	1,643	12.7	2,773	21.4	2,862	22.1	2,303	17.8	1,184	9.2	730	5.6	474	3.7	289	2.2	29	0.2
Anthropologists	Women	3900	235	6.0	822	21.1	1,183	30.3	836	21.4	370	9.5	208	5.3	81	2.1	38	1.0	20	0.5	8	0.2
Other Social	Total	35096	1288	3.7	4,389	12.5	7,609	21.7	8,211	23.4	6,179	17.6	3,298	9.4	1501	4.3	1251	3.6	510	1.5	149	0.4
Scientists	Women	7567	643	8.5	1,747	23.1	2,273	30.0	1,487	19.7	763	10.1	259	3.4	102	1.3	68	0.9	43	0.6	5	0.1
Engineers	Total	67768	1819	2.7	7,351	10.8	11,280	16.6	12,547	18.5	15,637	23.1	9,122	13.5	4074	6.0	2779	4.1	1799	2.7	217	0.3
	Women	1728	154	8.9	448	25.9	551	31.9	353	20.4	118	6.8	44	2.5	15	0.9	4	0.2	9	9.0	2	2.0

+ Total includes those who did not report their years of experience. Percentages are of these totals

* No cases reported.

SOURCE: National Research Council, Unpublished Data

TABLE 4-10

EMPLOYED DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SEX, RACE AND CITIZENSHIP, 1987

FIELD	SEX	TOTAL					WHITE					BLACK					AM. IND	ASIAN					HISPANIC				
		TOTAL *	U.S. CITIZEN		NON-CITIZEN		TOTAL+	U.S. CITIZEN		NON-CITIZEN		TOTAL	U.S. CITIZEN		NON-CIT		TOTAL	TOTAL	U.S. CITIZEN		NON-CIT		TOTAL	U.S. CIT		NON-CIT	
			Native	Nat.	Perm	Temp		Native	Nat.	Perm	Temp		Native	Nat.	Perm	Temp			Native	Nat.	Perm	Temp		Native	Nat.	Perm	emp
ALL FIELDS	T	419,118	349,916	43,372	21,675	3,557	372,985	338,565	21,755	10,886	1,400	6,359	4,832	763	642	102	546	36,307	3,864	20,477	9,966	1,916	6,949	3,991	1,718	930	304
	W	66,732	58,377	5,274	2,496	471	59,965	55,456	2,758	1,445	216	1,918	1,745	110	54	9	119	4,382	763	2,372	977	246	1,219	740	295	134	48
SCIENTISTS	T	351,350	302,668	30,358	15,337	2,548	319,091	292,457	16,701	8,590	1,095	5,704	4,531	622	429	102	510	23,645	3,319	12,747	6,184	1,249	5,865	3,474	1,346	776	263
	W	65,004	57,165	4,976	2,312	443	58,608	54,331	2,641	1,352	204	1,864	1,696	108	51	9	112	4,085	743	2,196	889	230	1,186	730	289	117	48
Chemists	T	44,136	35,766	5,319	2,770	278	38,635	34,733	2,299	1,492	108	483	322	43	76	42	59	4,741	452	2,959	1,202	128	675	500	117	55	3
	W	4,470	3,388	766	256	55	3,672	3,264	292	109	14	67	52	4	8	3	3	700	56	467	139	38	119	46	63	7	3
Physicists/ Astronomers	T	24,511	19,881	2,747	1,549	303	22,116	19,368	1,578	1,066	75	137	137				37	2,047	208	1,153	481	201	352	166	62	95	29
	W	1,014	715	125	146	24	814	673	49	78	14	8	8					185	27	76	66	10	20	9	6	5	
Mathematicians	T	13,878	11,380	1,477	843	178	12,640	11,083	902	590	65	146	146				10	988	63	569	253	113	238	123	66	45	5
	W	1,292	1,031	135	110	16	1,123	969	49	76	9	27	27				3	134	7	86	34	7	29	17	2	5	5
Statisticians	T	2,821	1,970	561	250	50	2,300	1,939	280	59	22	20	20				3	494	4	271	191	28	28		6		22
	W	333	241	25	57	10	258	230	9	15	2	5	5					68	2	16	42	8	2				2
Computer/Info. Specialists	T	18,571	15,022	2,097	1,293	159	16,219	14,655	971	523	70	200	57	114	29		5	1,836	110	982	678	66	329	201	63	51	14
	W	1,878	1,550	250	71	7	1,662	1,508	112	41	1	8	8				1	190	21	133	30	6	8	3	4	1	
Environmental Scientists	T	17,811	15,189	1,279	1,160	170	16,587	14,995	800	728	51	222	83	18	79	42	17	943	69	444	77		287	131	137	14	5
	W	1,301	1,117	116	58	10	1,188	1,086	63	32	7	11	11				1	98	16	53	26	3	22	3	17	2	
Biological Scientists	T	61,965	53,819	5,197	2,308	559	56,081	52,044	2,519	1,194	261	828	616	116	96		51	4,733	864	2,558	991	281	747	518	115	102	12
	W	13,516	11,486	1,331	534	136	11,885	10,946	607	272	42	256	223	33			21	1,285	239	689	252	94	67	48	14	4	1
Agricultural Scientists	T	15,796	14,132	1,039	504	119	14,572	13,752	480	269	69	145	118	15	12		34	984	185	621	208	50	377	117	179	54	27
	W	1,078	888	93	82	13	963	847	59	42	13	20	20				2	91	17	34	40		39	21	5	13	
Medical Scientists	T	29,597	25,160	3,054	1,153	164	26,302	24,090	1,646	480	75	483	436	11	16		41	2,510	413	1,365	645	52	438	248	130	36	22
	W	7,515	6,760	506	221	25	6,774	6,413	211	132	15	236	221	11			20	458	79	284	85	10	122	110	9	1	
Psychologists	T	56,378	53,284	2,227	764	19	53,655	51,030	1,961	600	10	1,266	1,207	20	39		113	858	517	209	118	9	1,016	761	203	47	5
	W	19,104	17,833	874	319	19	17,901	16,850	729	258	10	675	646	10	19		35	374	192	126	42	9	388	266	100	17	5
Economists	T	17,837	14,513	1,689	1,257	309	15,967	14,224	820	755	154	300	169	82	34	15	40	1,417	60	704	468	140	472	166	86	154	62
	W	2,036	1,708	155	104	69	1,858	1,685	75	41	55	42	13	15	11	3	4	130	6	61	52	11	58	20	7	14	17
Sociologists/ Anthropol.	T	12,933	11,606	807	470	10	11,960	11,049	540	344	7	347	283	64			67	462	137	196	126	3	223	148	27	48	
	W	3,900	3,609	160	121	10	3,638	3,432	101	98	7	142	129	13			7	91	26	39	23	3	67	50	13	4	
Other Social Scientists	T	35,096	30,946	2,875	1,016	230	32,037	29,496	1,905	438	128	1,127	937	139	46	3	33	1,650	257	816	470	99	663	396	166	75	57
	W	7,567	6,839	438	233	49	6,876	6,418	265	158	15	367	333	22	9	3	15	281	55	131	56	31	136	76	19	29	12
ENGINEERS	T	67,768	47,248	13,014	6,338	1,009	53,894	46,108	5,054	2,296	305	655	301	141	213		36	12,752	545	7,730	3,782	667	1,084	517	372	154	41
	W	1,728	1,212	298	184	28	1,347	1,126	117	93	12	54	49	2	3		7	307	20	177	88	16	33	10	6	17	
Chemical Engineers	T	6,923	4,597	1,385	786	136	4,988	4,554	260	135	30	72	14		58			1,814	7	1,135	566	106	102	91	8	3	
	W	140	97	28	15		111	88	15	8		7	7					20		13			2	1		1	
Civil Engineers	T	6,479	4,325	1,477	616	61	5,182	4,271	609	279	23	23	15	4	4		12	1,254	19	864	333	38	112	71	9	32	
	W	163	117	16	27	3	135	106	5	24		4	4					19	2	11	3	3					
Elec./Electron. Engineers	T	12,601	8,118	2,793	1,470	213	9,744	7,936	1,196	515	88	209	97	29	83		4	2,525	65	1,479	864	117	117	23	10	84	
	W	365	232	76	48	9	260	216	26	12	6	12	12					91	4	46	36	3	3	1	1	1	
Mechanical Engineers	T	6,711	4,440	1,484	673	86	5,124	4,229	520	303	24	127	27	97	3		1	1,412	136	847	367	62	69	46	11	12	
	W	98	63	23	7	5	73	60	9	2	2	4	1		3			21	2	14	2	3					

* Includes "Other" and "No Report". + Includes U.S. citizens whose birthplace is unknown and non-citizens whose visa status is unknown.
Blank indicates no cases reported.

SOURCE: Estimates for 1958-71 based on data by Adolph Wilburn. Estimates since 1971 by CPST based on Degree Data from the National Research Council.

TABLE 4-11

ESTIMATED PROPORTIONS OF BLACKS AMONG U.S. DOCTORATES AWARDED 1958-88

FIELD	Total	% of Total	Black	% of Black	Blacks as % of Total
Physical Sci. & Mathematics	113,093	16.0	1,083	5.5	0.96
Engineering	58,156	8.2	376	1.9	0.65
Life Sciences	111,761	15.8	1,668	8.4	1.49
Social Sciences	136,998	19.4	3,618	18.3	2.64
Arts & Humanities	97,067	13.8	1,834	9.3	1.89
Education	152,959	21.7	10,181	51.5	6.66
Professional Fields	32,941	4.7	1,062	5.4	3.22
TOTAL, ALL FIELDS	705,459	100.0	19,774	100.0	2.80

Note: In years after 1971, only U.S. Citizens and Permanent Visa residents have been counted. Earlier years include total doctorates awarded.

TABLE 4-12

DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SEX AND EMPLOYMENT STATUS, 1987

IELD OF Ph.D.	TOTAL			LABOR FORCE			L/F PARTICIPATION			UNEMPLOYMENT RATES			1983/87 CHANGE		
	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
Fields	451,438	378,015	73,423	423,669	355,563	68,106	93.8	94.1	92.8	1.1	0.9	2.0	0.1	0.1	-0.6
emistry	49,403	44,276	5,127	44,847	40,245	4,602	90.8	90.9	89.8	1.6	1.4	2.9	0.4	0.3	0.2
ysics/Astronomy	26,350	25,202	1,148	24,755	23,706	1,049	93.9	94.1	91.4	1.0	0.9	3.3	0.3	0.2	1.6
thematics	14,795	13,344	1,451	14,024	12,705	1,319	94.8	95.2	90.9	1.0	0.9	2.0	0.4	0.3	1.6
atistics	2,993	2,642	351	2,842	2,509	333	95.0	95.0	94.9	0.7	0.8	0.0	*	*	*
mputer/Info. Spec.	18,626	16,717	1,909	18,594	16,712	1,882	99.8	100.0	98.6	0.1	0.1	0.2	*	*	*
vironmental Sciences	18,985	17,538	1,447	17,976	16,635	1,341	94.7	94.9	92.7	0.9	0.8	3.0	0.1	0.2	-0.8
ological Sciences	68,734	53,189	15,545	63,052	49,134	13,918	91.7	92.4	89.5	1.7	1.4	2.9	0.2	0.4	-0.7
ricultural Sciences	17,831	16,620	1,211	16,047	14,935	1,112	90.0	89.9	91.8	1.6	1.5	3.1	0.8	0.8	-1.4
dical Sciences	30,888	22,857	8,031	29,755	22,155	7,600	96.3	96.9	94.6	0.5	0.3	1.1	-0.3	-0.4	-0.1
ychology	59,432	39,133	20,299	56,792	37,492	19,300	95.6	95.8	95.1	0.7	0.6	1.0	-0.4	-0.3	-0.5
cial Sciences	72,275	57,178	15,097	66,781	52,881	13,900	92.4	92.5	92.1	1.4	1.0	2.9	0.2	0.4	-0.7
gineering	71,126	69,319	1,807	68,204	66,457	1,747	95.9	95.9	96.7	0.6	0.6	1.1	0.1	0.1	-0.9

reported in 1983.

SOURCE: National Research Council, Unpublished Data
D4-14, 1-27-89

TABLE 4-13

EMPLOYED DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, WORK ACTIVITY, EMPLOYMENT SECTOR AND SEX, 1987

	TOTAL EMPLOYED			INDUSTRY & SELF EMPLOYED			EDUCATIONAL INSTITUTIONS			HOSPITALS AND CLINICS			NON-PROFIT ORGANIZATIONS			FEDERAL GOVT. & MILITARY/COMM. CORPS			STATE AND LOCAL GOVERNMENT		
	Total	Women	%W	Total	Wome	%W	Total	Wome	%W	Total	Wome	%W	Total	Women	%W	Total	Women	%W	Total	Women	%W
ALL FIELDS	419,118	66,732	15.9	131,699	15,882	12.1	218,697	37,562	17.2	12,158	3,719	30.6	15,464	3,519	22.8	29,710	3,588	12.1	9,223	2,086	22.6
ALL SCIENTISTS	351,350	65,004	18.5	94,552	14,937	15.8	194,987	36,994	19.0	12,134	3,711	30.6	13,290	3,476	26.2	25,772	3,469	13.5	8,697	2,046	23.5
Chemists	44,136	4,470	10.1	24,091	1,805	7.5	16,255	2,087	12.8	261	50	19.2	1,059	179	16.9	2,019	303	15.0	416	36	8.7
Physicsts/Astron.	24,511	1,014	4.1	6,650	260	3.9	14,055	622	4.4	96	7	7.3	1,108	49	4.4	2,551	73	2.9	32	1	3.1
Mathematicans	13,878	1,292	9.3	1,362	119	8.7	11,632	1,101	9.5				113	24	21.2	689	48	7.0	23		
Statisticians	2,821	333	11.8	476	88	18.5	2,042	208	10.2				38	6	15.8	262	28	10.7	3	3	100.0
Computer/Info. Spec.	18,571	1,878	10.1	11,383	1,104	9.7	5,558	568	10.2	80	2	2.5	444	74	16.7	816	35	4.3	258	91	35.3
Earth Scientists	13,577	979	7.2	4,693	245	5.2	5,116	416	8.1				367	51	13.9	2,461	191	7.8	862	75	8.7
Oceanographers	2,037	235	11.5	198	12	6.1	1,308	140	10.7	3	3	100.0	147	26	17.7	372	49	13.2	11	5	45.5
Atmospheric Sci.	2,197	87	4.0	277	15	5.4	1,061	54	5.1				188	9	4.8	631	7	1.1	40	2	5.0
Biological Sci.	61,965	13,516	21.8	9,716	1,853	19.1	41,723	9,492	22.8	921	237	25.7	2,856	755	26.4	5,540	937	16.9	979	171	17.5
Agricultural Sci.	15,796	1,078	6.8	3,882	310	8.0	8,883	601	6.8	1	1	100.0	382	26	6.8	2,215	104	4.7	304	29	9.5
Medical Scientists	29,597	7,515	25.4	6,857	1,058	15.4	15,809	4,613	29.2	3,307	878	26.5	1,018	295	29.0	1,905	404	21.2	661	247	37.4
Psychologists	56,378	19,104	33.9	17,381	6,336	36.5	25,369	7,931	31.3	7,155	2,410	33.7	2,501	1,196	47.8	1,641	432	26.3	2,197	741	33.7
Economists	17,837	2,036	11.4	2,819	402	14.3	11,778	1,211	10.3	21		0.0	607	90	14.8	1,409	201	14.3	455	43	9.5
Sociol./Anthrop.	12,933	3,900	30.2	1,216	312	25.7	10,420	3,120	29.9	120	75	62.5	563	196	34.8	293	116	39.6	217	69	31.8
Other Social Sci.	35,096	7,567	21.6	3,551	1,018	28.7	23,980	4,830	20.1	169	48	28.4	1,899	500	26.3	2,968	541	18.2	2,239	533	23.8
ENGINEERS	67,768	1,728	2.5	37,147	945	2.5	23,710	568	2.4	24	8	33.3	2,174	43	2.0	3,938	119	3.0	526	40	7.6

Blanks indicate no cases reported. * Includes those who did not report employment sector.

SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States: 1987, National Science Foundation (NSF 88-331)

TABLE 4-14

SEX AND RACE/ETHNICITY OF DOCTORAL SCIENTISTS AND ENGINEERS IN THE U.S., 1973-87

Year	Total	Men	Women	%Wom	White	%Wh	Black	%Bl	Asian	%A	Indian	%I	Hispanic	%H
1973	238,831	217,998	20,833	8.7	218,939	91.7	2,200	0.9	10,861	4.5	171	0.07	1,731	0.7
1975	270,355	244,844	25,511	9.4	245,835	90.9	2,628	1.0	13,948	5.2	214	0.08	2,139	0.8
1977	304,067	272,299	31,768	10.4	275,852	90.7	2,812	0.9	16,757	5.5	244	0.08	2,826	0.9
1979	332,918	294,927	37,991	11.4	302,624	90.9	3,523	1.1	23,614	7.1	404	0.12	4,228	1.3
1981	364,157	318,445	45,712	12.6	328,080	90.1	4,513	1.2	28,366	7.8	421	0.12	5,069	1.4
1983	395,033	340,482	54,551	13.8	354,432	89.7	5,277	1.3	31,076	7.9	443	0.11	5,716	1.4
1985	424,616	360,609	64,007	15.1	378,834	89.2	5,935	1.4	35,564	8.4	534	0.13	6,206	1.5
1987	451,438	378,015	73,423	16.3	403,421	89.4	6,691	1.5	37,530	8.3	586	0.13	7,202	1.6

SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States: 1987, National Science Foundation (NSF 88-331)

TABLE 4-15

EMPLOYED DOCTORATES BY FIELD, WORK ACTIVITY AND SEX, 1987

	Total Employed*			Research and Development			Management/ Administration			Teaching			Professional Services			Consulting		
FIELD	Total	Women	%W	Total	Women	%W	Total	Women	%W	Total	Women	%W	Total	Women	%W	Total	Women	%W
TOTAL ALL FIELDS	419,118	66,732	15.9	154,293	20,742	13.4	67,747	8,337	12.3	109,730	18,952	17.3	32,644	10,646	32.6	13,804	1,592	11.5
ALL SCIENTISTS	351,350	65,004	18.5	124,670	19,882	15.9	52,194	8,056	15.4	97,938	18,670	19.1	32,500	10,646	32.8	9,910	1,533	15.5
Chemists	44,136	4,470	10.1	21,407	2,191	10.2	7,405	449	6.1	9,172	1,277	13.9	380	55	14.5	1,129	36	3.2
Physicists/Astron.	24,511	1,014	4.1	13,122	613	4.7	3,529	80	2.3	6,041	232	3.8	151	2	1.3	261	6	2.3
Mathematicians	13,878	1,292	9.3	3,317	233	7.0	1,269	90	7.1	8,048	850	22.0	22	1	4.5	221	21	9.5
Statisticians	2,821	333	11.8	682	72	10.6	148	17	11.5	1,299	151	11.6				87	15	17.2
Computer/Info. Spec.	18,571	1,878	10.1	6482	427	6.6	3,640	345	9.5	2,809	298	10.6	3	3	100.0	825	98	11.9
Earth Scientists	13,577	979	7.2	5,024	385	7.7	2,813	159	5.7	2,944	250	8.5	76	3	3.9	1,274	74	5.8
Oceanographers	2,037	235	11.5	1,264	161	12.7	369	28	7.6	305	29	9.5	3	3	100.0	18	4	22.2
Atmospheric Sci.	2,197	87	4.0	1,420	65	4.6	402	5	1.2	169	8	4.7	9			110	1	0.9
Biological Sci.	61,985	13,516	21.8	35,515	8,077	22.7	6,898	983	14.3	14,270	3,182	22.3	948	269	28.4	1,010	224	22.2
Agricultural Sci.	15,796	1,078	6.8	7,790	601	7.7	2,762	119	4.3	2,369	158	6.7	219	8	3.7	635	13	2.0
Medical Scientists	29,597	7,515	25.4	9,814	2,371	24.2	5,883	1,480	25.2	5,062	1,932	38.2	5,553	903	16.3	613	140	22.8
Psychologists	56,378	19,104	33.9	6,471	2,184	33.8	6,725	2,152	32.0	13,839	4,074	29.4	24,677	9,200	37.3	1,576	472	29.9
Economists	17,837	2,036	11.4	4,928	663	13.5	2,301	187	8.1	7,691	801	10.4	75	2	2.7	914	141	15.4
Sociol./Anthrop.	12,933	3,900	30.2	2,212	640	28.9	1,444	632	43.8	7,481	2,184	29.2	179	73	40.8	324	36	11.1
Other Social Sci.	35,096	7,567	21.6	5,222	1,199	23.0	6,606	1,330	20.1	16,439	3,244	19.7	205	124	60.5	913	252	27.6
ENGINEERS	67,768	1,728	2.5	29,623	860	2.9	15,553	281	1.8	11,792	282	2.4	144		0.0	3,894	59	1.5

*Includes other and no report

SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States: 1987, National Science Foundation (NSF 88-331)

TABLE 4-16

EMPLOYED DOCTORAL SCIENTISTS AND ENGINEERS BY TYPE OF EMPLOYER, SEX AND RACE/ETHNICITY, 1973-87

BY EDUCATIONAL INSTITUTIONS

Year	Total	Men	Women	%Wom	White	%Wh	Black	%Bl	Asian	%A	Indian	%I	Hispanic	%H
1973	129,343	117,217	12,126	9.4	118,493	91.6	1,404	1.1	5,862	4.5	131	0.10	950	0.7
1975	149,076	133,588	15,488	10.4	135,837	91.1	1,756	1.2	7,249	4.9	166	0.11	1,251	0.8
1977	163,768	144,908	18,860	11.5	149,339	91.2	1,798	1.1	7,892	4.8	171	0.10	1,719	1.0
1979	174,483	152,561	21,922	12.6	159,709	91.5	2,106	1.2	10,979	6.3	297	0.17	2,259	1.3
1981	187,011	161,176	25,835	13.8	170,034	90.9	2,852	1.5	12,395	6.6	270	0.14	2,593	1.4
1983	196,050	166,734	29,316	15.0	177,638	90.6	3,333	1.7	12,899	6.6	294	0.15	2,828	1.4
1985	211,611	177,273	34,338	16.2	190,447	90.0	3,736	1.8	15,344	7.3	284	0.13	3,148	1.5
1987	218,697	181,135	37,562	17.2	196,532	89.9	3,903	1.8	16,432	7.5	338	0.15	3,733	1.7

IN BUSINESS AND INDUSTRY

Year	Total	Men	Women	%Wom	White	%Wh	Black	%Bl	Asian	%A	Indian	%I	Hispanic	%H
1973	53,403	52,040	1,363	2.6	48,978	91.7	298	0.6	3,099	5.8	5	0.01	264	0.5
1975	64,621	62,482	2,139	3.3	58,092	89.9	351	0.5	4,630	7.2	21	0.03	342	0.5
1977	71,562	68,577	2,985	4.2	63,367	88.5	426	0.6	6,096	8.5	40	0.06	458	0.6
1979	82,858	78,250	4,608	5.6	72,722	87.8	373	0.5	9,178	11.1	46	0.06	941	1.1
1981	99,126	91,912	7,214	7.3	85,913	86.7	577	0.6	11,890	12.0	54	0.05	1,256	1.3
1983	113,463	103,272	10,191	9.0	98,299	86.6	675	0.6	13,454	11.9	69	0.06	1,529	1.3
1985	125,767	112,822	12,945	10.3	108,338	86.1	972	0.8	15,117	12.0	88	0.07	1,576	1.3
1987	131,699	115,817	15,882	12.1	113,722	86.3	1,252	1.0	15,664	11.9	94	0.07	1,912	1.5

BY THE FEDERAL GOVERNMENT

Year	Total	Men	Women	%Wom	White	%Wh	Black	%Bl	Asian	%A	Indian	%I	Hispanic	%H
1973	18,205	17,229	976	5.4	17,154	94.2	197	1.1	517	2.8			138	0.8
1975	18,996	17,963	1,033	5.4	17,655	92.9	216	1.1	650	3.4	4	0.02	172	0.9
1977	21,389	20,116	1,273	6.0	19,780	92.5	249	1.2	829	3.9			155	0.7
1979	23,946	22,321	1,625	6.8	22,338	93.3	312	1.3	1,100	4.6	30	0.13	397	1.7
1981	25,124	23,128	1,996	7.9	23,285	92.7	281	1.1	1,326	5.3	38	0.15	432	1.7
1983	25,793	23,338	2,455	9.5	23,734	92.0	308	1.2	1,393	5.4	13	0.05	392	1.5
1985	26,337	23,643	2,694	10.2	23,910	90.8	323	1.2	1,826	6.9	25	0.09	508	1.9
1987	27,532	24,099	3,433	12.5	25,453	92.4	454	1.6	1,461	5.3	38	0.14	600	2.2

SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States: 1987, National Science Foundation (NSF 88-331)

TABLE 4-17

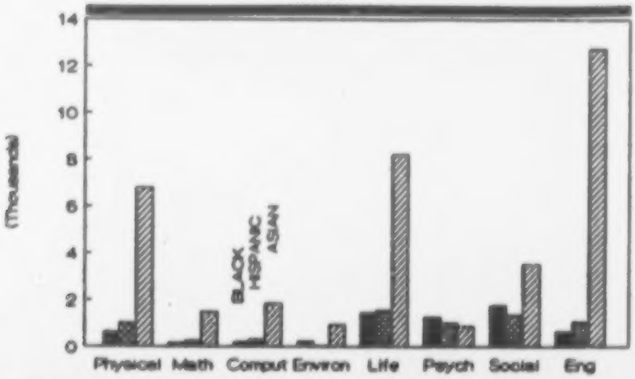
EMPLOYED MINORITY DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, RACE/ETHNICITY AND SECTOR, 1987

	Total+				Industry & Self Empl.				Educational Institutions				Government#			
FIELD	Black	Indian	Asian	Hisp	Black	Indian	Asian	Hisp	Black	Indian	Asian	Hisp	Black	Indian	Asian	Hisp
ALL FIELDS	6359	546	36397	6949	1252	94	15664	1929	3903	338	16432	3733	703	54	1987	815
Physical Scientists	620	96	6788	1027	175	21	3583	309	291	73	2628	548	137		377	151
Chemists	483	59	4741	675	157	18	3020	243	223	41	1368	358	99		231	59
Phys/Astron.	137	37	2047	352	18	3	563	66	68	32	1260	190	36		146	91
Math Scientists	166	13	1482	266	6		95	24	147	6	1251	215	11	7	105	17
Computer/Info Spec	200	5	1838	329	179	3	1344	158	11	1	450	137	10	1	27	8
Environmental Sci.	222	17	943	37	81	6	332	75	69	3	361	146	19	8	181	62
Earth Scientists	175	15	768	204	81	6	307	70	24	3	274	95	17	6	127	36
Oceanographers	2		100	54			6	1	2		61	34			33	18
Atmospheric Sci.	45	2	75	29			19	4	43		26	17	2	2	21	8
Life Scientists	1456	126	8207	1562	154	32	1785	319	1030	76	5209	992	187	9	563	165
Biological Sci.	828	51	4733	747	48	14	790	92	636	31	3192	513	104	4	304	113
Agricultural Sci.	145	34	964	377	16	4	375	159	106	25	457	204	23	5	106	11
Medical Sci.	438	41	2510	438	90	14	620	68	288	20	1560	275	60		153	41
Psychologists	1266	113	858	1016	229	17	116	387	735	47	439	380	107	6	63	61
Social Scientists	1774	140	3529	1378	118		438	125	1362	117	2476	886	158	17	281	229
Economists	300	40	1417	472	44		225	56	197	40	867	252	20		150	63
Social/Anthrop.	347	67	462	223	15		30	17	321	57	391	176	3	4	34	17
Other Social Sci.	1127	33	1650	683	59		183	52	844	20	1218	458	135	13	97	149
Engineers	655	36	12752	1084	310	15	7971	515	258	15	3618	429	74	6	390	112

+ Also includes those employed in hospitals, clinics and non profit organizations plus other and no report.
# Includes state, local, federal government, military and commissioned corps.
Blank spaces indicate too few to estimate.

CHART 4-2

MINORITY SCIENCE & ENGINEERING PhDs, 1987



SOURCE: Humanities Doctorates in the United States: 1987 Profile

TABLE 4-18

DEMOGRAPHIC CHARACTERISTICS OF HUMANITIES DOCTORATES BY FIELD OF PHD, 1987
(1944-1986 Graduates)

Demographic Characteristics	All Fields	Field of Doctorate									
		Amer History	"Other History"	Art History	Music	Speech/ Theater	Phil-osophy	English/ Amer Lang & Lit	Clas-sical Lang & Lit	Modern Lang & Lit	"Other Human-ities"
Total Population (N)	95,000	9,500	12,500	2,800	7,400	4,100	7,200	24,600	1,900	16,600	8,400
Gender											
Male	69.1	85.1	79.3	46.6	76.7	75.2	84.4	63.1	69.7	65.6	64.6
Female	30.9	14.9	20.7	53.4	23.3	24.8	15.6	36.9	30.3	44.4	35.4
Racial/Ethnic Group											
White	93.0	94.7	94.0	94.7	93.9	95.5	95.5	95.7	98.3	85.1	91.5
Minority Group	6.5	4.3	5.7	5.1	5.9	3.9	4.4	3.8	1.7	14.7	7.5
Hispanic	3.0	0.6	1.7	1.5	0.6	0.3	1.3	1.3	0.5	11.2	2.4
Black	1.8	3.1	1.7	1.1	3.6	2.4	0.4	1.5	0.7	1.5	2.0
Asian	1.4	0.5	1.6	2.3	1.4	0.5	2.3	0.9	0.1	1.8	2.9
American Indian	0.2	0.1	0.6	0.1	0.3	0.7	0.3	0.1	0.4	0.2	0.2
Other	0.1	0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1
No Report	0.4	0.7	0.3	0.1	0.1	0.5	0.1	0.4	0.0	0.2	0.9
Age in 1987											
Under 30	0.2	0.0	0.3	0.0	0.1	0.0	0.4	0.0	0.6	0.1	0.5
30-39	17.3	12.8	13.2	23.3	24.8	12.7	18.2	16.3	16.7	16.7	25.7
40-49	39.8	42.6	38.3	40.8	37.5	33.4	42.1	39.0	40.6	39.9	43.0
50-59	23.9	25.1	28.9	20.8	22.2	25.5	21.6	24.7	23.0	23.1	18.2
60 and over	18.4	19.5	18.5	14.4	14.2	27.5	17.3	19.7	18.9	19.7	12.3
No Report	0.5	0.0	0.9	0.7	1.1	0.8	0.4	0.3	0.3	0.5	0.2
Median Age (Years)	47	48	48	45	45	51	46	48	47	48	44
Year of Doctorate											
1944-1949	2.1	1.9	3.6	0.8	0.8	1.9	2.1	2.3	3.3	2.2	0.9
1950-1959	9.5	13.5	10.3	6.7	6.2	10.2	10.7	9.2	11.0	9.2	7.2
1960-1969	21.4	23.1	25.3	15.0	14.2	30.6	22.8	23.5	29.0	19.1	12.8
1970-1979	44.4	45.0	42.9	47.6	44.2	35.9	44.0	45.6	39.2	47.2	42.1
1980-1986*	22.7	16.5	17.9	29.9	34.6	21.4	20.4	19.4	17.6	22.3	37.1
1980 (1/80-6/80)	2.2	1.7	2.2	2.1	2.4	1.8	1.8	2.2	2.3	1.7	3.7
1981-1982 (7/80-6/82)	7.0	4.8	6.3	9.4	9.7	6.4	6.6	6.2	5.9	7.6	9.4
1983-1984 (7/82-6/84)	6.8	5.0	5.3	9.9	11.0	6.9	5.9	5.4	4.9	7.1	10.9
1985-1986 (7/84-6/86)	6.7	5.0	4.1	8.5	11.5	6.3	6.1	5.6	4.5	5.9	13.1
Citizenship											
U.S.	97.0	99.1	98.6	94.7	98.0	98.3	97.4	98.5	96.2	92.2	96.7
Foreign**	2.9	0.9	1.4	5.3	2.0	1.6	2.6	1.4	3.8	7.8	3.3
No Report	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0

*Excludes Ph.D.s awarded from 7/86 to 12/86.

**In view of the lack of a comprehensive sampling frame for foreign-earned Ph.D.s in the United States, the number of humanities Ph.D.s who are foreign citizens may be somewhat underestimated.

SOURCE: National Science Foundation Division of Science Resources Studies

TABLE 4-19

NUMBER OF U.S. SCIENTISTS & ENGINEERS BY FIELD AND SEX, 1988

	Total	Men		Women		
		No.	V%	No.	V%	H%
Total	5,287,400	4,417,500	100.0	869,900	100.0	16.5
Scientists	2,567,200	1,821,500	41.2	745,700	85.7	29.0
Physical	318,000	273,200	6.2	44,800	5.2	14.1
Physics	116,800	109,300	2.5	7,500	0.9	6.4
Chemistry	201,200	163,900	3.7	37,300	4.3	18.5
Math	172,200	127,500	2.9	44,700	5.1	26.0
Computer	708,199	491,899	11.1	216,300	24.9	30.5
Environmental	106,000	91,100	2.1	14,900	1.7	14.1
Life	454,700	327,900	7.4	126,800	14.6	27.9
Psychological	268,900	134,700	3.0	134,200	15.4	49.9
Social	528,300	364,300	8.2	164,000	18.9	31.0
Engineers	2,718,200	2,596,000	58.8	122,200	14.0	4.5

* Too few to estimate. # Includes all racial groups.

SOURCE: Employment and Earnings, U. S. Department of Labor

TABLE 4-20

Women as a Percentage of All Employed Workers

	1960	1970	1975	1980	1985	1988
All Workers	**32.7**	**37.8**	**39.6**	**42.4**	**44.1**	**45.0**
Architects	2.0	3.6	4.3	6.7	11.3	14.6
Computer Specialists		19.6	21.2	25.7	30.0	29.5
Engineers	0.9	1.6	1.1	4.0	6.7	7.3
Lawyers & Judges	3.4	4.8	7.1	12.8	18.2	19.5
Librarians			81.1	85.2	87.0	85.4
Biological Scientists	27.6	16.2	31.5	37.5	33.3	39.7
Chemists	8.0	11.9	14.5	20.3	21.0	24.1
Systems Analysts		9.6	15.3	28.7	28.0	29.5
Pharmacists	8.0	11.9	17.6	25.0	29.8	31.9
Physicians	6.8	9.2	13.0	13.4	17.2	20.0
Dentists	2.1	3.4	1.8	4.3	6.5	9.3
Economists	14.0	11.2	13.1	25.4	34.5	35.3
Psychologists	30.5	38.1	42.6	50.9	50.4	55.8
Social Workers			60.8	65.0	66.7	66.0
Coll/Univ Teachers	21.6	28.4	31.1	33.9	35.2	38.5
Secondary Teachers			49.2	52.1	54.0	51.2
Pers/Labor Rel. Spec.	30.1		36.5	46.9	56.5	58.9
Electricians		0.2	0.6	1.2	1.6	1.4
Carpenters		0.9	0.6	1.5	1.2	1.5

SOURCE: U.S. Scientists and Engineers: 1986, National Science Foundation

TABLE 4-21

EMPLOYED SCIENTISTS AND ENGINEERS BY FIELD, SEX, RACIAL/ETHNIC GROUP AND HIGHEST DEGREE, 1986

Field	Total	%	Doctorate	%D	Masters	%M	Bachelors	%B	Field	Total	%	Doctorat	%D	Masters	%M	Bachelors	%B
Total, All Fields (1)	4,626,500	100.0	616,700	13.3	1,090,400	23.6	2,636,600	57.0	Environmental Scientists	111,300	100.0	20,500	18.4	34,600	31.1	56,100	50.4
Women	698,600	15.1	96,600	13.8	170,000	24.3	423,100	60.6	Women	12,900	11.6	1,700	13.2	3,500	27.1	7,700	59.7
White	4,190,400	90.6	555,500	13.3	965,400	23.0	2,407,900	57.5	White	105,800	95.1	19,000	18.0	33,500	31.7	53,200	50.3
Black	114,900	2.5	10,200	8.9	30,500	26.5	67,500	58.7	Black	1,000	0.9	100	10.0	100	10.0	800	80.0
Asian	226,800	4.9	42,000	18.5	74,500	32.8	102,300	45.1	Asian	2,100	1.9	1,200	57.1	700	33.3	300	14.3
Native American	23,600	0.5	2,600	11.0	4,700	19.9	14,000	59.3	Native American	400	0.4	(3)	----	100	25.0	400	100.0
Hispanic (2)	93,400	2.0	9,800	10.5	19,500	20.9	57,700	61.8	Hispanic	1,800	1.6	400	22.2	500	27.8	1,000	55.6
Total Scientists	2,186,300	100.0	511,200	23.4	529,100	24.2	1,126,400	51.5	Life Scientists	411,800	100.0	121,300	29.5	88,200	21.4	192,100	46.6
Women	599,600	27.4	92,300	15.4	148,400	24.7	356,600	59.5	Women	102,800	25.0	18,400	17.9	24,400	23.7	58,600	57.0
White	1,973,100	90.2	468,600	23.7	469,300	23.8	1,017,100	51.5	White	377,900	91.8	113,300	30.0	81,600	21.6	173,300	45.9
Black	73,700	3.4	8,900	12.1	22,400	30.4	41,300	56.0	Black	8,800	2.1	1,000	11.4	1,800	20.5	5,900	67.0
Asian	94,000	4.3	26,300	28.0	27,900	29.7	39,300	41.8	Asian	15,000	3.6	5,700	38.0	2,600	17.3	6,400	42.7
Native American	10,300	0.5	2,300	22.3	2,100	20.4	5,800	56.3	Native American	2,800	0.7	500	17.9	1,000	35.7	1,300	46.4
Hispanic	46,100	2.1	8,500	18.4	9,400	20.4	28,300	61.4	Hispanic	9,900	2.4	2,300	23.2	2,000	20.2	5,500	55.6
Physical Scientists	288,400	100.0	114,300	39.6	58,500	20.3	114,500	39.7	Psychologists	253,500	100.0	97,500	38.5	67,400	26.6	87,400	34.5
Women	38,300	13.3	7,500	19.6	8,900	23.2	21,900	57.2	Women	115,200	45.4	35,800	31.1	32,900	28.6	46,300	40.2
White	261,800	90.8	103,700	39.6	52,800	20.2	104,200	39.8	White	234,100	92.3	93,300	39.9	62,700	26.8	77,000	32.9
Black	6,200	2.1	1,400	22.6	1,300	21.0	3,400	54.8	Black	9,100	3.6	2,200	24.2	3,400	37.4	3,500	38.5
Asian	15,400	5.3	7,000	45.5	3,100	20.1	5,300	34.4	Asian	5,200	2.1	900	17.3	400	7.7	3,800	73.1
Native American	1,000	0.3	700	70.0	(3)	----	300	30.0	Native American	1,900	0.7	900	47.4	300	15.8	800	42.1
Hispanic	4,800	1.7	2,300	47.9	1,500	31.3	900	18.8	Hispanic	5,900	2.3	300	5.1	1,200	20.3	4,300	72.9
Mathematical Scientists	131,000	100.0	40,200	30.7	44,100	33.7	46,500	35.5	Social Scientists	427,800	100.0	98,400	23.0	94,400	22.1	230,100	53.8
Women	33,900	25.9	4,500	13.3	13,400	39.5	16,000	47.2	Women	134,000	31.3	21,400	16.0	32,400	24.2	80,100	59.8
White	115,500	88.2	34,500	29.9	39,100	33.9	41,700	36.1	White	380,800	89.0	89,200	23.4	81,600	21.4	205,200	53.9
Black	6,800	5.2	1,500	22.1	2,900	42.6	2,300	33.8	Black	22,900	5.4	2,500	10.9	6,700	29.3	13,700	59.8
Asian	5,900	4.5	3,200	54.2	1,500	25.4	1,200	20.3	Asian	14,200	3.3	5,100	35.9	4,300	30.3	4,800	33.8
Native American	200	0.2	100	50.0	(3)	----	100	50.0	Native American	1,700	0.4	200	11.8	300	17.6	1,200	70.6
Hispanic	3,100	2.4	600	19.4	900	29.0	1,500	48.4	Hispanic	11,400	2.7	2,500	21.9	1,700	14.9	7,200	63.2
Computer Scientists	562,600	100.0	18,900	3.4	141,900	25.2	399,700	71.0	Engineers	2,440,100	100.0	105,500	4.3	561,300	23.0	1,510,200	61.9
Women	162,500	28.9	3,000	1.8	32,800	20.2	126,000	77.5	Women	99,000	4.1	4,300	4.3	21,600	21.8	66,600	67.3
White	497,100	88.4	15,500	3.1	116,100	23.8	362,500	72.9	White	2,217,300	90.9	87,000	3.9	496,100	22.4	1,390,800	62.7
Black	18,900	3.4	100	0.5	6,100	32.3	11,700	61.9	Black	41,300	1.7	1,300	3.1	8,100	19.6	26,100	63.2
Asian	36,100	6.4	3,200	8.9	15,300	42.4	17,500	48.5	Asian	132,800	5.4	15,600	11.7	46,600	35.1	62,900	47.4
Native American	2,200	0.4	(3)	---	400	18.2	1,700	77.3	Native American	13,300	0.5	300	2.3	2,600	19.5	8,100	60.9
Hispanic	9,300	1.7	(3)	---	1,500	16.1	7,800	83.9	Hispanic	47,200	1.9	1,300	2.8	10,100	21.4	29,400	62.3

(1) Detail will not add to total employed because racial and ethnic categories are not mutually exclusive and total employed includes other and no report.

(2) Includes members of all racial groups.

(3) Too few cases to estimate.

SOURCE: U.S. Scientists and Engineers: 1986, National Science Foundation

TABLE 4-22

EMPLOYED SCIENTISTS AND ENGINEERS BY FIELD, SEX, RACIAL/ETHNIC GROUP AND AGE, 1986

Field, Sex and Racial/ Ethnic Group	Total	%	Age																					
			<25	%	25-29	%	30-34	%	35-39	%	40-44	%	45-49	%	50-54	%	55-59	%	60-64	%	65-69	%	>69	%
Total, All Fields (1)	4,626,500	100.0	174,300	3.8	765,300	16.5	577,500	12.5	699,400	15.1	638,900	13.8	491,700	10.6	429,300	9.3	407,400	8.8	293,200	6.3	96,700	2.1	38,200	0.8
Women	698,600	15.1	65,000	9.3	237,200	34.0	115,300	16.5	98,000	14.0	70,600	10.1	41,700	6.0	26,600	3.8	17,200	2.5	13,400	1.9	6,600	0.9	2,300	0.3
White	4,190,400	90.6	156,900	3.7	688,700	16.4	521,800	12.5	623,100	14.9	570,900	13.6	439,400	10.5	388,500	9.3	379,500	9.1	280,000	6.7	92,800	2.2	37,000	0.9
Black	114,900	2.5	4,200	3.7	27,000	23.5	18,100	15.8	22,200	19.3	15,100	13.1	9,200	8.0	9,700	8.4	5,700	5.0	2,900	2.5	300	0.3	100	0.1
Asian	226,800	6.9	8,500	3.7	29,100	12.8	25,800	11.4	39,100	17.2	41,300	18.2	32,700	14.4	24,100	10.6	16,300	7.2	7,400	3.3	1,800	0.8	300	0.1
Native American	23,600	0.5	200	0.8	1,700	7.2	1,900	8.1	2,900	12.3	4,000	16.9	3,000	12.7	3,100	13.1	3,000	12.7	1,800	7.6	1,300	5.5	600	2.5
Hispanic (2)	93,600	2.0	4,800	5.1	23,000	24.6	14,700	15.7	15,000	16.1	13,500	14.5	6,400	6.9	6,200	6.6	5,700	6.1	1,600	1.7	1,800	1.9	400	0.4
Total Scientists	2,186,300	100.0	119,200	5.5	450,800	20.6	295,500	13.5	354,800	16.2	313,200	14.3	208,700	9.5	152,500	7.0	151,800	6.9	83,400	3.8	33,100	1.5	14,700	0.7
Women	599,600	27.4	54,800	9.1	193,300	32.2	97,500	16.3	87,000	14.5	65,900	11.0	39,100	6.5	23,200	3.9	15,700	2.6	10,800	1.8	6,600	1.1	2,300	0.4
White	1,973,100	90.2	106,300	5.4	404,400	20.5	266,300	13.5	317,400	16.1	283,100	14.3	187,000	9.5	135,500	6.9	140,200	7.1	79,500	4.0	32,000	1.6	14,500	0.7
Black	73,700	3.4	3,100	4.2	19,600	26.6	11,600	15.7	14,000	19.0	8,700	11.8	5,400	7.3	6,500	8.8	3,200	4.3	1,100	1.5	200	0.3	100	0.1
Asian	94,000	4.3	6,500	6.9	15,100	16.1	11,200	11.9	15,900	16.9	15,900	16.9	12,000	12.8	8,700	9.3	5,600	6.0	2,500	2.7	600	0.6	100	0.1
Native American	10,300	0.5	200	1.9	1,000	9.7	1,000	9.7	1,100	10.7	1,800	17.5	1,700	16.5	700	6.8	2,000	19.4	100	1.0	600	5.8	100	1.0
Hispanic	46,100	2.1	3,300	7.2	15,100	32.8	7,200	15.6	7,700	16.7	6,500	14.1	2,500	5.4	1,600	3.5	1,600	3.5	200	0.4	500	1.1		
Physical Scientists	288,600	100.0	8,800	3.1	32,400	11.2	29,700	10.3	34,100	11.8	45,000	15.6	39,500	13.7	33,500	11.6	33,300	11.5	21,600	7.5	7,500	2.6	2,600	0.9
Women	38,300	13.3	3,800	9.9	9,700	25.3	6,000	15.7	5,800	15.1	3,900	10.2	2,900	7.6	2,200	5.7	1,400	3.7	1,100	2.9	1,000	2.6	400	1.0
White	261,800	90.8	8,300	3.2	29,500	11.3	27,300	10.4	29,800	11.4	40,300	15.4	35,400	13.5	30,200	11.5	30,300	11.6	20,800	7.9	7,000	2.7	2,600	1.0
Black	6,200	2.1	200	3.2	1,200	19.4	600	9.7	1,100	17.7	800	12.9	400	6.5	700	11.3	1,000	16.1	100	1.6				
Asian	15,400	5.3	100	0.6	1,000	6.5	900	5.8	2,300	14.9	3,400	22.1	2,900	18.8	2,300	14.9	1,500	9.7	600	3.9	200	1.3	100	0.6
Native American	1,000	0.3	(3)		100	10.0									300	30.0	400	40.0			200	20.0		
Hispanic	4,800	1.7	200	4.2	600	12.5	500	10.4	400	8.3	1,300	27.1	700	14.6	800	16.7					300	6.3		
Mathematical Scientists	131,000	100.0	6,200	4.7	18,600	14.2	14,600	11.1	20,700	15.8	23,600	18.0	17,900	13.7	9,200	7.0	14,000	10.7	3,200	2.4	1,500	1.1	1,000	0.8
Women	33,900	25.9	3,600	10.6	8,400	24.8	5,300	15.6	4,500	13.3	4,900	14.5	3,700	10.9	1,200	3.5	400	1.2	1,100	3.2	600	1.8	100	0.3
White	115,500	88.2	5,800	5.0	17,000	14.7	13,200	11.4	17,500	15.2	21,900	19.0	15,500	13.4	7,000	6.1	11,600	10.0	2,900	2.5	1,500	1.3	1,000	0.9
Black	6,800	5.2	100	1.5	700	10.3	200	2.9	1,400	20.6	700	10.3	1,200	17.6	1,800	26.5	400	5.9	200	2.9				
Asian	5,900	4.5	200	3.4	400	6.8	500	8.5	1,000	16.9	700	11.9	900	15.3	300	5.1	[illegible]		100	1.7				
Native American	200	0.2			100	50.0									100	50.0								
Hispanic	3,100	2.4	200	6.5	300	9.7	400	12.9	900	29.0	1,000	32.3	100	3.2	100	3.2								
Computer Scientists	562,600	100.0	41,100	7.3	127,500	22.7	100,500	17.9	115,700	20.6	80,900	14.4	43,100	7.7	27,900	5.0	15,500	2.8	5,700	1.0	1,200	0.2	500	0.1
Women	162,500	28.9	17,000	10.5	50,600	31.1	35,500	21.8	31,200	19.2	15,200	9.4	6,600	4.1	2,900	1.8	1,700	1.0	800	0.5	100	0.1		0.0
White	497,100	88.4	38,300	7.7	112,600	22.7	90,600	18.2	100,500	20.2	70,700	14.2	37,300	7.5	23,100	4.6	14,500	2.9	5,400	1.1	1,200	0.2	500	0.1
Black	18,900	3.4	900	4.8	3,900	20.6	3,200	16.9	4,700	24.9	2,100	11.1	2,100	11.1	1,000	5.3	700	3.7	100	0.5				
Asian	36,100	6.4	1,300	3.6	7,800	21.6	5,200	14.4	9,000	24.9	7,000	19.4	2,000	5.5	3,500	9.7	100	0.3	100	0.3				
Native American	2,200	0.4	100	4.5	200	9.1			200	9.1	700	31.8	800	36.4	200	9.1								
Hispanic	9,300	1.7	900	9.7	3,300	35.5	1,900	20.4	1,800	19.4	300	3.2	700	7.5	100	1.1	300	3.2	100	1.1				

(1) Detail will not add to total employed because racial and ethnic categories are not mutually exclusive and total employed includes other and no report.

(2) Includes members of all racial groups.

(3) Blanks indicate too few cases to estimate.

SOURCE: U.S. Scientists and Engineers: 1986, National Science Foundation

TABLE 4-22 (continued)

EMPLOYED SCIENTISTS AND ENGINEERS BY FIELD, SEX, RACIAL/ETHNIC GROUP AND AGE, 1986 (continued)

Field, Sex and Racial/ Ethnic Group	Total	%	Age																			
			<25	%	25-29	%	30-34	%	35-39	%	40-44	%	45-49	%	50-54	%	55-59	%	60-64	%	65-69	%	>69	%
Environmental Scientists	111,300	100.0	2,500	2.2	20,800	18.7	19,000	17.1	16.300	14.6	11,900	10.7	8,800	7.9	11,500	10.3	9,500	8.5	6,600	6.1	2,400	2.2	1,700	1.5
Women	12,900	11.6	700	5.4	5,300	41.1	2,900	22.5	1,900	14.7	1,000	7.8	500	3.9	100	0.8	200	1.6	200	1.6	100	0.8		0.0
White	105,800	95.1	2,400	2.3	20,200	19.1	17,900	16.9	15,000	14.2	11,200	10.6	7,900	7.5	10,900	10.3	9,400	8.9	6,800	6.4	2,300	2.2	1,700	1.6
Black	1,000	0.9			100	10.0	700	70.0	100	10.0	100	10.0			100	10.0								
Asian	2,100	1.9			200	9.5	100	4.8	300	14.3	500	23.8	600	28.6	300	14.3	100	4.8						
Native American	400	0.4					100	25.0	100	25.0					100	25.0	100	25.0			100	25.0		
Hispanic	1,800	1.6			300	16.7	500	27.8	300	16.7	100	5.6	100	5.6	200	11.1	100	5.6			100	5.6		
Life Scientists	411,800	100.0	16,500	4.0	88,400	21.5	56,100	13.6	60,500	14.7	52,800	12.8	35,700	8.7	28,800	7.0	36,500	8.9	22,100	5.4	8,100	2.0	5,100	1.2
Women	102,800	25.0	9,000	8.8	40,000	38.9	16,000	15.6	12,300	12.0	8,500	8.3	5,000	4.9	3,900	3.8	4,500	4.4	1,900	1.8	800	0.8	500	0.5
White	377,900	91.8	15,500	4.1	79,100	20.9	51,900	13.7	55,700	14.2	49,200	13.0	32,900	8.7	26,500	7.0	33,800	8.9	21,400	5.7	7,900	2.1	5,100	1.3
Black	8,800	2.1	200	2.3	2,500	28.4	1,000	11.4	3,000	34.1	700	8.0	200	2.3	600	6.8	400	4.5	200	2.3	100	1.1		
Asian	15,000	3.6	700	4.7	3,300	22.0	1,600	10.7	2,300	15.3	2,700	18.0	2,200	14.7	1,100	7.3	800	5.3	300	2.0	100	0.7		
Native American	2,800	0.7			200	7.1	600	21.4	300	10.7	100	3.6	200	7.1	100	3.6	1,100	39.3	100	3.6	100	3.6		
Hispanic	9,900	2.4	300	3.0	6,200	62.6	1,900	19.2	1,100	11.1	600	6.0	700	7.1	200	2.0	1,100	11.1	100	1.0				
Psychologists	253,500	100.0	12,100	4.8	45,200	17.8	29,900	11.8	42,900	16.9	44,600	17.6	26,100	10.3	19,300	7.6	19,600	7.7	8,400	3.3	3,500	1.4	1,200	0.5
Women	115,200	45.4	9,000	7.8	28,600	24.8	15,300	13.3	15,600	13.5	18,500	16.1	10,200	8.9	8,200	7.1	5,200	4.5	2,200	1.9	1,900	1.6	200	0.2
White	234,100	92.3	8,000	3.4	42,100	18.0	26,800	11.4	40,600	17.3	42,000	17.9	24,600	10.5	18,000	7.7	19,300	8.2	7,900	3.4	3,200	1.4	1,100	0.5
Black	9,100	3.6	200	2.2	2,000	22.0	2,100	23.1	1,600	17.6	1,200	13.2	600	6.6	900	9.9	100	1.1	300	3.3				
Asian	5,200	2.1	3,300	63.5	200	3.8	100	1.9	300	5.8	400	7.7	200	3.8	300	5.8	200	3.8	100	1.9				
Native American	1,900	0.7			100	5.3	200	10.5	300	15.8	300	15.8	700	36.8							300	15.8		
Hispanic	5,900	2.3	500	8.5	2,400	40.7	1,100	18.6	800	13.6	900	15.3	100	1.7	200	3.4								
Social Scientists	427,800	100.0	32,100	7.5	117,900	27.6	45,700	10.7	64,700	15.1	54,500	12.7	37,500	8.8	22,300	5.2	23,400	5.5	15,700	3.7	9,000	2.1	2,600	0.6
Women	134,000	31.3	11,800	8.8	50,800	37.9	16,600	12.4	15,700	11.7	13,900	10.4	10,100	7.5	4,800	3.6	2,300	1.7	3,500	2.6	2,200	1.6	1,100	0.8
White	380,800	89.0	28,100	7.4	103,900	27.3	38,600	10.1	60,300	15.8	47,900	12.6	33,600	8.8	19,800	5.2	21,400	5.6	14,300	3.8	8,900	2.3	2,500	0.7
Black	22,900	5.4	1,600	7.0	9,200	40.2	3,700	16.2	2,000	8.7	3,200	14.0	900	3.9	1,500	6.6	700	3.1	100	0.4	100	0.4		
Asian	14,200	3.3	900	6.3	2,200	15.5	2,700	19.0	700	4.9	1,200	8.5	3,100	21.8	900	6.3	1,000	7.0	1,300	9.2				
Native American	1,700	0.4			400	23.5	100	5.9	200	11.8	700	41.2			100	5.9	100	5.9					100	5.9
Hispanic	11,400	2.7	1,100	9.6	4,000	35.1	800	7.0	2,500	21.9	2,600	22.8	200	1.8			200	1.8			100	0.9		
Engineers	2,440,100	100.0	55,100	2.3	314,500	12.9	282,000	11.6	344,600	14.1	325,700	13.3	283,000	11.6	276,800	11.3	255,600	10.5	209,800	8.6	63,600	2.6	23,400	1.0
Women	99,000	4.1	10,200	10.3	43,900	44.3	17,800	18.0	11,000	11.1	6,700	6.7	2,700	2.7	3,300	3.3	1,400	1.4	2,700	2.7	100	0.1		
White	2,217,300	90.9	50,600	2.3	284,500	12.8	255,400	11.5	305,700	13.8	287,800	13.0	252,600	11.4	252,900	11.4	239,300	10.8	200,500	9.0	60,800	2.7	22,500	1.0
Black	41,300	1.7	1,100	2.7	7,400	17.9	6,400	15.5	8,300	20.1	6,500	15.7	3,800	9.2	3,200	7.7	2,500	6.1	1,800	4.4	100	0.2		
Asian	132,800	5.4	2.000	1.5	14,000	10.5	14,600	11.0	23,200	17.5	25,500	19.2	20,700	15.6	15,400	11.6	10,700	8.1	4,900	3.7	1,400	1.1	300	0.2
Native American	13,300	0.5			700	5.3	900	6.8	1,800	13.5	2,200	16.5	1.400	10.5	2,300	17.3	1.000	7.5	1,700	12.8	700	5.3	500	3.8
Hispanic	47,200	1.9	1,500	3.2	7,900	16.7	7,400	16.1	7,300	15.5	7,100	15.0	3,900	8.3	4,600	9.7	4,000	8.5	1,400	3.0	1,300	2.8	400	0.8

(1) Detail will not add to total employed because racial and ethnic categories are not mutually exclusive and total employed includes other and no report.

(2) Includes members of all racial groups.

(3) Blanks indicate too few cases to estimate.

SOURCE: U.S. Scientists and Engineers: 1986, National Science Foundation

TABLE 4-23

EMPLOYED SCIENTISTS AND ENGINEERS BY FIELD, SEX AND PRIMARY WORK ACTIVITY, 1986

Field and sex	Total Employed		Research and Development								Other Work Activity (1)									
	Number	%	Total	%	Basic research	%	Applied research	%	Development	%	Management	%	Teaching	%	Consulting	%	Production, inspect.	%	Reporting, Stat wor	%
Total, all fields	4,626,500	100.0	1,268,900	27.4	135,700	2.9	257,700	5.6	875,500	18.9	1,282,200	27.7	357,800	7.7	252,100	5.4	582,600	12.6	472,800	10.2
Men	3,927,800	84.9	1,116,700	28.4	102,700	2.6	211,700	5.4	802,300	20.4	1,148,300	29.2	276,300	7.0	228,000	5.8	529,000	13.5	341,100	8.7
Women	698,600	15.1	152,200	21.8	33,000	4.7	46,000	6.6	73,200	10.5	133,800	19.2	81,500	11.7	24,100	3.4	53,600	7.7	131,700	18.9
Total scientists	2,186,300	100.0	473,700	21.7	123,100	5.6	168,400	7.7	182,200	8.3	545,600	25.0	300,800	13.8	82,400	3.8	159,000	7.3	359,600	16.4
Men	1,586,700	72.6	362,600	22.9	91,600	5.8	129,700	8.2	141,300	8.9	424,900	26.8	223,300	14.1	63,200	4.0	124,400	7.8	237,200	14.9
Women	599,600	27.4	111,100	18.5	31,500	5.3	38,700	6.5	41,000	6.8	120,600	20.1	77,500	12.9	19,200	3.2	34,600	5.8	122,400	20.4
Physical scientists	288,400	100.0	115,200	39.9	28,000	9.7	42,500	14.7	44,700	15.5	73,400	25.5	45,800	15.9	5,500	1.9	32,200	11.2	6,900	2.4
Men	250,100	86.7	100,500	40.2	24,500	9.8	36,300	14.5	39,700	15.9	68,200	27.3	39,000	15.6	5,200	2.1	24,100	9.6	5,700	2.3
Women	38,300	13.3	14,700	38.4	3,500	9.1	6,200	16.2	5,100	13.3	5,200	13.6	6,800	17.8	200	0.5	8,000	20.9	1,200	3.1
Mathematical sci	131,000	100.0	18,100	13.8	5,300	4.0	6,700	5.1	6,000	4.6	35,600	27.2	46,600	35.6	3,000	2.3	5,100	3.9	16,500	12.6
Men	97,100	74.1	15,200	15.7	5,000	5.1	5,400	5.6	4,700	4.8	28,400	29.2	33,800	34.8	2,100	2.2	3,500	3.6	10,900	11.2
Women	33,900	25.9	2,900	8.6	300	0.9	1,300	3.8	1,300	3.8	7,200	21.2	12,800	37.8	900	2.7	1,600	4.7	5,600	16.5
Computer spec	562,600	100.0	112,800	20.0	4,200	0.7	10,900	1.9	97,800	17.4	86,800	15.4	19,600	3.5	33,300	5.9	20,500	3.6	271,300	48.2
Men	400,000	71.1	83,700	20.9	3,200	0.8	8,000	2.0	72,400	18.1	70,600	17.7	12,800	3.2	23,400	5.9	15,900	4.0	180,700	45.2
Women	162,500	28.9	29,200	18.0	1,000	0.6	2,800	1.7	25,400	15.6	16,200	10.0	6,800	4.2	9,900	6.1	4,500	2.8	90,600	55.8
Environmental sci	111,300	100.0	36,400	32.7	10,000	9.0	19,900	17.9	6,400	5.8	21,800	19.6	9,200	8.3	6,500	5.8	23,800	21.4	6,800	6.1
Men	98,400	88.4	31,200	31.7	8,200	8.3	17,400	17.7	5,600	5.7	19,900	20.2	8,300	8.4	6,000	6.1	21,900	22.3	5,700	5.8
Women	12,900	11.6	5,100	39.5	1,800	14.0	2,600	20.2	800	6.2	1,900	14.7	900	7.0	500	3.9	1,800	14.0	1,100	8.5
Life scientists	411,800	100.0	128,400	31.2	57,600	14.0	55,100	13.4	15,700	3.8	110,200	26.8	61,500	14.9	10,700	2.6	44,000	10.7	13,300	3.2
Men	309,000	75.0	91,000	29.4	39,600	12.8	40,800	13.2	10,600	3.4	93,300	30.2	46,700	15.1	9,400	3.0	34,700	11.2	8,800	2.8
Women	102,800	25.0	37,400	36.4	18,000	17.5	14,300	13.9	5,100	5.0	16,900	16.4	14,700	14.3	1,200	1.2	9,300	9.0	4,500	4.4
Psychologists	253,500	100.0	20,600	8.1	7,900	3.1	9,500	3.7	3,200	1.3	65,900	26.0	39,100	15.4	6,700	2.6	11,000	4.3	5,300	2.1
Men	138,400	54.6	11,300	8.2	4,600	3.3	5,300	3.8	1,500	1.1	37,200	26.9	25,900	18.7	4,100	3.0	7,600	5.5	2,000	1.4
Women	115,200	45.4	9,300	8.1	3,300	2.9	4,300	3.7	1,700	1.5	28,700	24.9	13,200	11.5	2,600	2.3	3,400	3.0	3,300	2.9
Social scientists	427,800	100.0	42,200	9.9	10,100	2.4	23,700	5.5	8,500	2.0	151,800	35.5	79,000	18.5	16,600	3.9	22,500	5.3	39,500	9.2
Men	293,800	68.7	29,700	10.1	6,400	2.2	16,500	5.6	6,700	2.3	107,300	36.5	56,800	19.3	12,900	4.4	16,700	5.7	23,500	8.0
Women	134,000	31.3	12,600	9.4	3,600	2.7	7,200	5.4	1,700	1.3	44,500	33.2	22,300	16.6	3,800	2.8	5,900	4.4	16,000	11.9
Total engineers	2,440,100	100.0	795,200	32.6	12,700	0.5	89,300	3.7	693,200	28.4	736,600	30.2	56,900	2.3	169,700	7.0	423,600	17.4	113,200	4.6
Men	2,341,100	95.9	754,100	32.2	11,100	0.5	82,000	3.5	661,000	28.2	723,400	30.9	53,000	2.3	164,800	7.0	404,600	17.3	103,900	4.4
Women	99,000	4.1	41,100	41.5	1,500	1.5	7,400	7.5	32,200	32.5	13,200	13.3	3,900	3.9	4,900	4.9	19,000	19.2	9,400	9.5

(1) Does not include Sales, Professional Services, Other, or No Report

NOTE: Data may not add to total because of rounding.

SOURCE: Earned Degrees Conferred, 1950 through 1986, Department of Education Center for Statistics; and Profiles - Chemistry: Human Resources and Funding, National Science Foundation, 1987

TABLE 4-24

NUMBER OF BACHELOR'S DEGREES GRANTED, 1950-1985 COMPARED WITH 1986 POPULATION OF SCIENTISTS AND ENGINEERS, BY FIELD AND SEX

FIELD	BACHELOR'S DEGREES, 1950-1985				SCIENTISTS & ENGINEERS, 1986				S/Es in 1986 as a % of B.S Degrees Granted 1950-1985	
	Total	Men	Women	%W	Total	Men	Women	%W	Men	Women
Physical/Environmental Sciences	905,349	747,013	158,336	17.5	437,600	387,200	50,400	11.5	51.8	31.8
Math/Statistical/Computer Sciences	959,467	614,769	344,698	35.9	639,300	475,700	163,600	25.6	77.4	47.5
Biological/Agricultural Sciences	2,367,044	1,685,421	681,623	28.8	440,900	331,100	109,800	24.9	19.6	16.1
Psychology	1,417,150	664,456	752,694	53.1	255,300	146,700	108,600	42.5	22.1	14.4
Social Sciences	2,810,263	1,781,676	1,028,587	36.6	413,500	292,900	120,600	29.2	16.4	11.7
Engineering	2,054,968	1,964,167	90,801	4.4	2,719,300	2,625,400	93,900	3.5	133.7	103.4
Total Science & Enginering	10,514,261	7,457,502	3,056,739	29.1	4,905,900	4,259,000	646,900	13.2	57.1	21.2

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, January 1989

TABLE 4-25

SELECTED CHARACTERISTICS OF PHYSICALLY DISABLED SCIENTISTS AND ENGINEERS, 1986

Field	Total population	Visual	Auditory	Ambulatory	Other
Total scientists and engineers	94,200	21,100	16,500	20,500	36,100
Scientists	40,400	9,700	7,600	9,800	13,400
Physical scientists	7,600	2,500	1,100	1,400	2,600
Mathematical scientists	1,600	300	400	500	500
Computer specialists	9,200	1,800	2,700	3,000	1,700
Environmental scientists	3,000	200	400	1,500	1,100
Life scientists	6,300	1,300	1,200	1,700	2,100
Psychologists	6,100	1,100	1,400	1,200	2,400
Social scientists	6,600	2,600	400	700	2,900
Engineers	53,800	11,400	8,900	10,800	22,700

SOURCE: Immigration and naturalization service, U.S. Department of Justice and National Science Foundation, SRS in Immigrant Scientists and Engineers, 1986, National Science Foundation

TABLE 4-26

IMMIGRANT SCIENTISTS AND ENGINEERS BY MAJOR S/E GROUP, AND PERCENT ADMITTED BY ADJUSTMENT OF STATUS, 1966-1986

(In thousands)

YEAR	Total All Immigrants	Engineers	Natural Scientists	Math and Computer† Specialists	Social Scientists	Admitted via Adjusted Status°
1966	7.2	4.9	.8	.2	.3	32%
1967	12.5	8.8	2.8	.4	.5	41
1968	13.0	9.3	2.8	.4	.6	32
1969	10.3	7.2	2.4	.2	.5	34
1970	13.3	9.3	2.9	.3	.8	41
1971	13.1	9.0	3.1	.4	.6	45
1972	11.3	7.4	2.9	.3	.6	48
1973	6.6	4.4	1.6	.1	.4	34
1974	6.4	3.9	1.3	.6	.6	34
1975	7.4	4.6	1.5	.7	.6	34
1976	7.8	5.1	1.5	.5	.6	35
1977	8.2	5.2	1.8	.6	.6	32
1978	10.5	6.8	2.1	.9	.8	40
*						
1982	12.2	7.9	1.8	1.8	.7	56
1983	10.6	6.8	1.5	1.6	.6	52
1984	9.5	6.1	1.4	1.5	.6	46
1985	11.0	8.1	1.3	1.0	.5	49
1986	11.2	8.4	1.3	1.0	.5	48

*1979-81 not available

†First Available in 1974

°Scientists and Engineers who Changed to immigrant status while resident in the U.S. Includes former intra-company transferees, students, exchange visitors and temporary workers

SOURCE: Digest of Education Statistics 1988, National Center for Education Statistics

TABLE 4-27

HIGHEST EDUCATION LEVEL ATTAINED BY 1980 HIGH SCHOOL SENIORS IN SPRING 1986 BY SEX AND RACE

Student and school characteristics	Educational attainment of 1980 high school seniors in 1986						
	Total	No high school diploma[1]	High school diploma	License[2]	Associate degeree	Bachelor's degree	Graduate/ professional degree
1	2	3	4	5	6	7	8
Total	**100.0**	**0.9**	**61.8**	**11.9**	**6.5**	**18.2**	**0.7**
Sex							
Men	100.0	1.0	64.0	10.5	5.9	17.6	0.9
Women	100.0	0.8	59.6	13.3	7.0	18.8	0.6
Race/ethnicity							
White, non-Hispanic	100.0	0.8	60.0	11.5	6.6	20.2	0.9
Black, non-Hispanic	100.0	1.2	69.4	13.9	5.3	9.9	0.2
Hispanic	100.0	1.7	70.2	13.8	7.3	6.8	0.1
Asian	100.0	([3])	49.6	12.6	8.7	27.3	1.7
American Indian	100.0	([3])	61.3	16.6	9.3	10.8	([3])

[1] Seniors who dropped out of high school after spring 1980 survey.

[2] Persons who earned a certificate for completing a program of study.

[3] Less than .05 percent.

[4] Socioeconomic status was measured by a composite score on parental education, family income, father's occupation, and household characteristics in 1980.

[5] Students' self-reported high school program.

[6] During their senior year of high school, students were asked about the highest level of education they planned to attain. Students who planned to get less than a high school education or a high school education only were classified as having no postsecondary education plans.

NOTE.—Because of rounding, percents may not add to 100.0.

TABLE 4-28

HIGHEST LEVEL OF EDUCATION ATTAINED BY 1980 HIGH SCHOOL SENIORS IN SPRING 1986 BY RACE/ETHNICITY AND SOCIOECONOMIC STATUS

Socioeconomic status[1] and race/ethnicity	Educational attainment of 1980 high school seniors in 1986						
	Total	No high school diploma[2]	High school diploma	License[3]	Associate degree	Bachelor's degree	Graduate/ professional degree
1	2	3	4	5	6	7	8
Lower							
White, non-Hispanic	100.0	0.9	75.1	12.2	5.0	6.6	0.3
Black, non-Hispanic	100.0	1.4	73.0	12.7	5.1	7.7	0.1
Hispanic	100.0	1.6	73.9	11.8	7.8	4.9	([4])
Asian	100.0	([4])	53.4	17.3	15.7	12.0	1.6
Middle							
White, non-Hispanic	100.0	0.3	62.0	13.0	8.0	16.3	0.4
Black, non-Hispanic	100.0	0.3	67.5	14.7	6.5	10.7	0.3
Hispanic	100.0	1.0	67.0	14.7	6.5	10.7	0.2
Asian	100.0	([4])	51.1	11.7	11.1	26.1	([4])
Upper							
White, non-Hispanic	100.0	([4])	44.9	8.6	6.2	38.2	2.2
Black, non-Hispanic	100.0	([4])	56.3	12.4	5.4	25.5	0.4
Hispanic	100.0	0.3	60.0	11.4	9.6	18.0	0.7
Asian	100.0	([4])	42.9	6.5	4.8	40.0	5.9

[1] Socioeconomic status was measured by a composite score on parental education, family income, father's occupation, and household characteristics in 1980.

[2] Seniors who dropped out of high school after spring 1980 survey.

[3] Includes persons who earned a certificate for completing a program of study.

[4] Less than .05 percent.

NOTE.—Because of rounding, percents may not add to 100.0.

SOURCE: Federal Scientists and Engineers, 1988, National Science Foundation

TABLE 4-29

MANAGEMENT OR SUPERVISORY STATUS OF FEDERAL SCIENTISTS AND ENGINEERS, BY SEX AND RACE/ETHNICITY, 1988

	Total	Supervisor/ Manager	%	Nonmanagement/ Nonsuperv	%	Status Unknown	%
Total	217,618	59,179	27.2	153,338	70.5	5,101	2.3
Men	187,519	55,378	29.5	127,587	68.0	4,554	2.4
Women	30,098	3,801	12.6	25,750	85.6	547	1.8
% Women	13.8	6.4		16.8		10.7	
White	189,613	54,196	28.6	130,817	69.0	4,600	2.4
%W	87.1	91.6		85.3		90.2	
Black	9,471	1,590	16.8	7,646	80.7	235	2.5
%B	4.4	2.7		5.0		4.6	
Asian	11,665	1,968	16.9	9,487	81.3	210	1.8
%A	5.4	3.3		6.2		4.1	
Hispanic	5,603	1,033	18.4	4,528	80.8	42	0.7
%H	2.6	1.7		3.0		0.8	
All Other	1,170	366	31.3	790	67.5	14	1.2
%O	0.5	0.6		0.5		0.3	
Unknown	96	26	27.1	70	72.9		
%U	0.04	0.04		0.05			

SOURCE: Biennial Surveys of Earned Doctorates, 1973-1987, National Research Council

CHART 4-3

WOMEN AS % OF EMPLOYED S/E PhDs 1973 - 1987

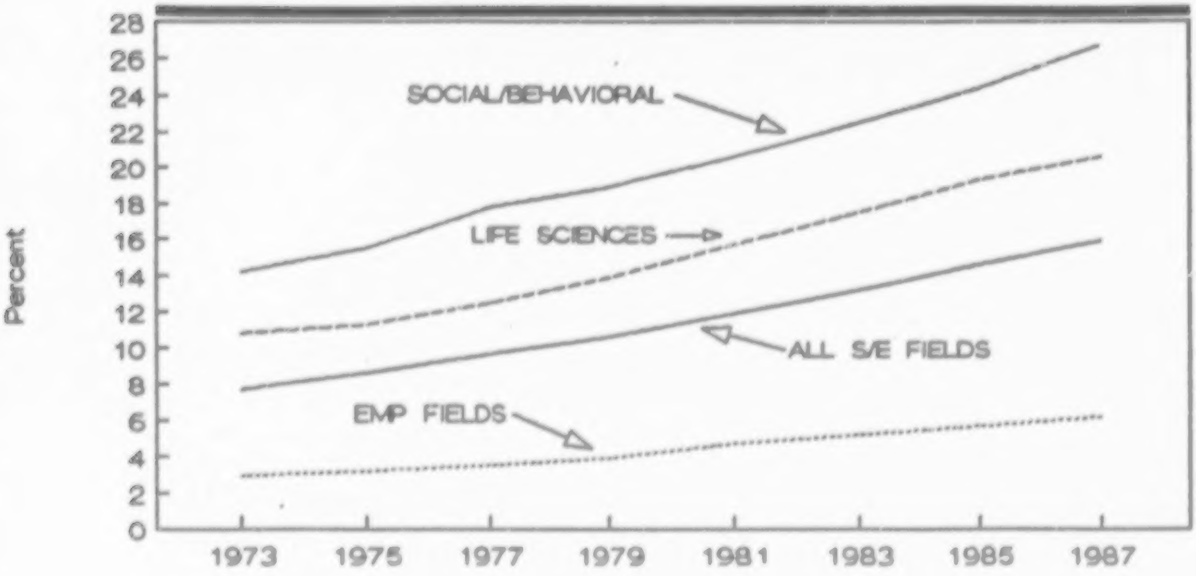
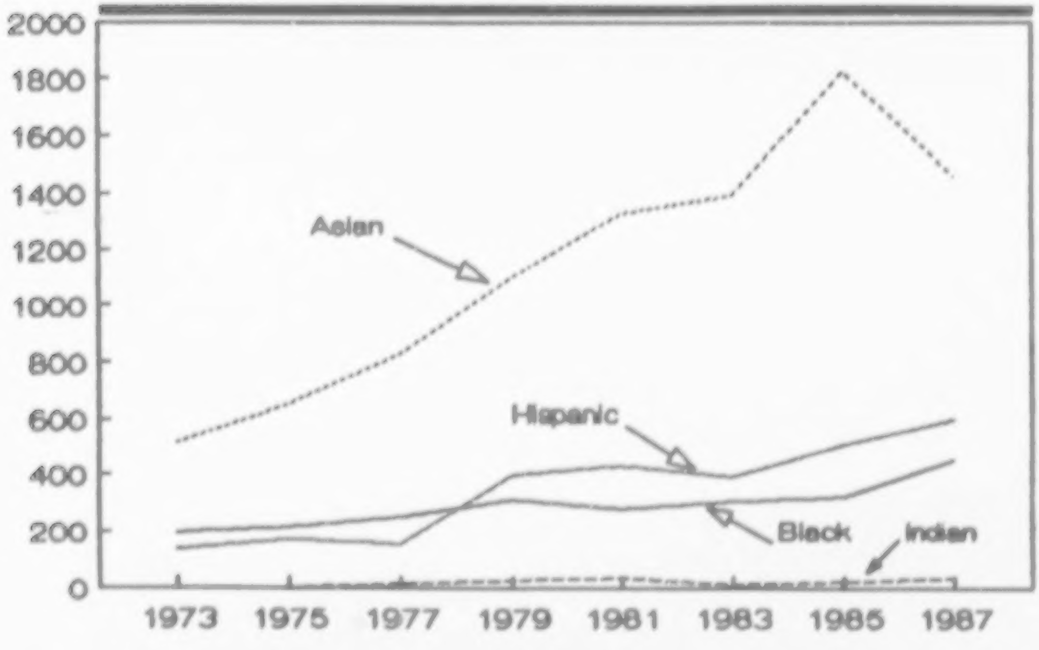


CHART 4-4

MINORITY S/E PhDs IN FEDERAL GOVERNMENT 1973-1987



Note: EMP = Engineering, Mathematical/Computer and Physical Sciences. S/E Fields add Life, Social and Behavioral Sciences plus the EMP fields.

SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States, 1987 National Science Foundation.

TABLE 5-1

DOCTORAL SCIENTISTS AND ENGINEEERS IN ACADEMIC INSTITUTIONS BY FIELD, RANK AND SEX, 1987

Fields	Total Faculty*	Professor	%	Associate Prof	%	Assistant Prof	%	Instructor/ Lecturer	%	Adjunct Faculty	%	Other Faculty	%
Total Fields	209,384	85,819	41	50,483	24	36,486	17	4,234	2.0	3,047	1.5	16,175	7.7
Men	174,514	79,612	46	41,709	24	26,394	15	2,454	1.4	2,016	1.2	11,774	6.7
Women	34,870	6,207	18	8,774	25	10,092	29	1,780	5.1	1,031	3.0	4,401	12.6
All Scientists	185,746	74,451	40	45,628	25	32,743	18	4,066	2.2	2,735	1.5	14,970	8.1
Men	151,441	68,316	45	36,993	24	22,861	15	2,300	1.5	1,710	1.1	10,636	7.0
Women	34,305	6,135	18	8,635	25	9,882	29	1,766	5.1	1,025	3.0	4,334	12.6
Chemists	15,104	7,433	49	2,802	19	1,707	11	299	2.0	202	1.3	1,458	9.7
Men	13,306	7,038	53	2,471	19	1,328	10	174	1.3	139	1.0	1,148	8.6
Women	1,798	395	22	331	18	379	21	125	7.0	63	3.5	310	17.2
Physicists/Astron	13,625	5,851	43	2,017	15	1,323	10	151	1.1	114	0.8	1,751	12.9
Men	13,040	5,745	44	1,928	15	1,191	9	129	1.0	106	0.8	1,633	12.5
Women	585	106	18	89	15	132	23	22	3.8	8	1.4	118	20.2
Mathematicians	10,989	5,703	52	2,741	25	1,840	17	295	2.7	48	0.4	175	1.6
Men	9,968	5,432	54	2,423	24	1,498	15	255	2.6	39	0.4	146	1.5
Women	1,021	271	27	318	31	342	33	40	3.9	9	0.9	29	2.8
Statisticians	2,042	742	36	455	22	623	31	6	0.3	30	1.5	62	3.0
Men	1,834	714	39	399	22	545	30			25	1.4	43	2.3
Women	208	28	13	56	27	78	38	6	2.9	5	2.4	19	9.1
Computer/Info Spec	5,439	1,331	24	1,612	30	1,312	24	102	1.9	160	2.9	406	7.5
Men	4,880	1,273	26	1,473	30	1,127	23	88	1.8	151	3.1	373	7.6
Women	559	58	10	139	25	185	33	14	2.5	9	1.6	33	5.9
Earth Scientists	5,011	2,213	44	991	20	878	18	73	1.5	106	2.1	374	7.5
Men	4,617	2,170	47	913	20	735	16	53	1.1	83	1.8	330	7.1
Women	394	43	11	78	20	143	36	20	5.1	23	5.8	44	11.2
Oceanographers	1,303	370	28	252	19	250	19	12	0.9	20	1.5	261	20.0
Men	1,166	358	31	229	20	201	17	12	1.0	16	1.4	241	20.7
Women	137	12	9	23	17	49	36			4	2.9	20	14.6
Atmospheric Sci	1,061	223	21	271	26	127	12	7	0.7	3	0.3	274	25.8
Men	1,007	217	22	257	26	120	12	7	0.7			253	25.1
Women	54	6	11	14	26	7	13			3	5.6	21	38.9
Biological Sci	40,416	14,788	37	9,077	22	7,137	18	994	2.5	502	1.2	4,956	12.3
Men	31,377	13,397	43	7,077	23	5,025	16	538	1.7	261	0.8	3,060	9.8
Women	9,039	1,391	15	2,000	22	2,112	23	456	5.0	241	2.7	1,896	21.0
Agricultural Sci	8,654	4,192	48	2,061	24	1,512	17	19	0.2	62	0.7	691	8.0
Men	8,053	4,127	51	1,941	24	1,287	16	9	0.1	44	0.5	561	7.0
Women	601	65	11	120	20	225	37	10	1.7	18	3.0	130	21.6
Medical Scientists	15,668	4,990	32	4,048	26	3,734	24	429	2.7	196	1.3	1,298	8.3
Men	11,148	4,261	38	2,774	25	2,176	20	288	2.6	115	1.0	867	7.8
Women	4,520	729	16	1,274	28	1,558	34	141	3.1	81	1.8	431	9.5
Psychologists	22,012	8,510	39	5,747	26	4,038	18	654	3.0	545	2.5	1,475	6.7
Men	15,321	7,266	47	4,098	27	2,176	14	156	1.0	238	1.6	792	5.2
Women	6,691	1,244	19	1,649	25	1,862	28	498	7.4	307	4.6	683	10.2
Economists	11,654	5,349	46	3,102	27	2,462	21	231	2.0	93	0.8	364	3.1
Men	10,445	5,030	48	2,718	26	2,134	20	145	1.4	51	0.5	318	3.0
Women	1,209	319	26	384	32	328	27	86	7.1	42	3.5	46	3.8
Sociologists/Anthro.	9,905	4,041	41	3,054	31	1,887	19	286	2.9	127	1.3	342	3.5
Men	6,964	3,416	49	2,208	32	934	13	119	1.7	71	1.0	122	1.8
Women	2,941	625	21	846	29	953	32	167	5.7	56	1.9	220	7.5
Other Social Sci	22,863	8,715	38	7,398	32	3,913	17	508	2.2	527	2.3	1,083	4.7
Men	18,315	7,872	43	6,084	33	2,384	13	327	1.8	371	2.0	749	4.1
Women	4,548	843	19	1,314	29	1,529	34	181	4.0	156	3.4	334	7.3
Engineers	23,636	11,368	48	4,855	21	3,743	16	168	0.7	312	1.3	1,205	5.1
Men	23,073	11,296	49	4,718	20	3,533	15	154	0.7	306	1.3	1,138	4.9
Women	565	72	13	139	25	210	37	14	2.5	6	1.1	67	11.9

Includes "Does not Apply" and "No Report". Blanks indicate no cases reported.

SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States: 1987, National Science Foundation (NSF 88-331)

TABLE 5-2

DOCTORAL SCIENTISTS AND ENGINEERS WHO ARE COLLEGE OR UNIVERSITY TEACHERS BY RACE/ETHNICITY, FIELD, RANK AND SEX, 1987

	Total(1)			Professor			Asso. Prof.			Asst. Prof.			Instructor			Lecturer		
FIELD and MINORITY	No.	Wom	%W	No.	W	%W	No.	W	%W	No.	W	%W	No.	W	%W	No.	W	%W
All Fields	156739	24958	15.9	72543	5234	7.2	44282	7670	17.3	30483	8652	28.4	1129	542	48.0	2032	849	41.8
White	141371	22589	16.0	66312	4695	7.1	39703	6974	17.6	27048	7858	29.1	906	498	55.0	1790	765	42.7
Black	2745	835	30.4	764	139	18.2	1054	272	25.8	738	361	48.9	17	8	47.1	72	12	16.7
Am. Indian/Aleut	230	33	14.3	104		0.0	80	3	3.8	36	27	75.0	2		0.0			
Asian/Pacific Isl.	11242	1357	12.1	4898	370	7.6	3031	355	11.7	2473	381	15.4	201	33	16.4	130	64	49.2
Hispanic	2246	457	20.3	684	67	9.8	708	129	18.2	652	182	27.9	22	16	72.7	76	15	19.7
Scientists	139139	24524	17.6	62843	5179	8.2	40041	7536	18.8	27432	8453	30.8	1095	542	49.5	1904	835	43.9
White	126630	22228	17.6	57740	4651	8.1	36325	6856	18.9	24668	7693	31.2	885	498	56.3	1672	756	45.2
Black	2506	824	32.9	754	139	18.4	934	272	29.1	636	353	55.5	17	8	47.1	70	12	17.1
Am. Indian/Aleut	227	33	14.5	104		0.0	80	3	3.8	35	27	77.1						
Asian/Pacific Isl.	8731	1297	14.9	3843	359	9.3	2290	339	14.8	1936	355	18.3	190	33	17.4	124	61	49.2
Hispanic	1969	452	23.0	618	67	10.8	535	127	23.7	614	179	29.2	22	16	72.7	76	15	19.7
Physical Scientists	20252	1576	7.8	11824	471	4.0	4385	392	8.9	2752	450	16.4	81	16	19.8	294	102	34.7
White	18333	1348	7.4	10829	420	3.9	4082	320	7.8	2400	407	17.0	15	15	100.0	206	89	43.2
Black	228	35	15.4	81	19	23.5	35	5	14.3	51	9	17.6	5		0.0	42		0.0
Am. Indian/Aleut	67	1	1.5	36		0.0	30		0.0	1	1	100.0						
Asian/Pacific Isl.	1527	188	12.3	801	32	4.0	234	63	26.9	284	33	11.6	61	1	1.6	46	13	28.3
Hispanic	244	43	17.6	148	12	8.1	44	16	36.4	36	15	41.7				13		0.0
Mathematical Scientists	12052	1097	9.1	6067	263	4.3	3094	339	11.0	2394	418	17.5	157	19	12.1	142	27	19.0
White	10759	908	8.4	5626	215	3.8	2760	281	10.2	1954	346	17.7	98	17	17.3	130	20	15.4
Black	119	23	19.3	52	12	23.1	51	6	11.8	11	5	45.5				3		0.0
Am. Indian/Aleut	6	3	50.0				3		0.0	3	3	100.0						
Asian/Pacific Isl.	1122	161	14.3	371	35	9.4	276	51	18.5	405	64	15.8	59	2	3.4	9	7	77.8
Hispanic	165	24	14.5	20	2	10.0	37	4	10.8	94	13	13.8	3		0.0	6	3	50.0

(1) Includes "Other" and "No Report". Blanks indicate no cases reported.

SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States: 1987, National Science Foundation (NSF 88-331)

TABLE 5-2 (continued)

DOCTORAL SCIENTISTS AND ENGINEERS WHO ARE COLLEGE OR UNIVERSITY TEACHERS BY RACE/ETHNICITY, FIELD, RANK AND SEX, 1987

	Total(1)			Professor			Asso. Prof.			Asst. Prof.			Instructor			Lecturer		
FIELD and MINORITY	No.	Wom	%W	No.	W	%W	No.	W	%W	No.	W	%W	No.	W	%W	No.	W	%W
Environmental Scientists	5168	408	7.9	2327	44	1.9	1371	112	8.2	1147	170	14.8	20	2	10.0	46	16	34.8
White	4896	372	7.6	2205	30	1.4	1301	101	7.8	1098	163	14.8	20	2	10.0	23	16	69.6
Black	22	3	13.6	9		0.0	3	3	100.0	8		0.0						
Am. Indian/Aleut	2		0.0				2		0.0									
Asian/Pacific Isl.	240	30	12.5	113	14	12.4	60	8	13.3	38	4	10.5				23		0.0
Hispanic	84		0.0	29		0.0	20		0.0	29		0.0						
Life Scientists	42391	8919	21.0	18296	1732	9.5	12085	2809	23.2	8711	2945	33.8	511	235	46.0	296	194	65.5
White	38404	8115	21.1	16600	1502	9.0	10830	2569	23.7	7951	2704	34.0	452	209	46.2	292	190	65.1
Black	657	242	36.8	230	60	26.1	278	84	30.2	126	86	68.3	8	4	50.0			
Am. Indian/Aleut	57	16	28.1	38		0.0	1	1	100.0	15	12	80.0						
Asian/Pacific Isl.	3006	492	16.4	1339	160	11.9	876	119	13.6	550	135	24.5	51	22	43.1	4	4	100.0
Hispanic	581	156	26.9	220	33	15.0	172	45	26.2	139	50	36.0	11	8	72.7	5	5	100.0
Social/Behav. Sci.	55293	12153	22.0	23274	2618	11.2	17583	3766	21.4	11260	4292	38.1	309	264	85.4	1044	491	47.0
White	50627	11150	22.0	21463	2435	11.3	15983	3478	21.8	10263	3917	38.2	294	249	84.7	939	436	46.4
Black	1472	521	35.4	382	48	12.6	561	174	31.0	438	253	57.8	4	4	100.0	25	12	48.0
Am. Indian/Aleut	95	13	13.7	30	0	0.0	44	2	4.5	16	11	68.8	0	0		0	0	
Asian/Pacific Isl.	2501	390	15.6	1183	116	9.8	702	87	12.4	516	97	18.8	8	8	100.0	42	37	88.1
Hispanic	836	226	27.0	173	20	11.6	252	62	24.6	297	98	33.0	8	8	100.0	52	7	13.5
Engineers	17600	434	2.5	9700	55	0.6	4241	134	3.2	3051	199	6.5	34		0.0	128	14	10.9
White	14741	361	2.4	8572	44	0.5	3378	118	3.5	2380	165	6.9	21		0.0	118	9	7.6
Black	239	11	4.6	10		0.0	120		0.0	102	8	7.8				2		0.0
Am. Indian/Aleut	3		0.0							1		0.0	2		0.0			
Asian/Pacific Isl.	2511	60	2.4	1055	11	1.0	741	16	2.2	537	26	4.8	11		0.0	6	3	50.0
Hispanic	277	5	1.8	66		0.0	173	2	1.2	38	3	7.9						

(1) Includes "Other" and "No Report". Blanks indicate no cases reported.

SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States: 1987, National Science Foundation (NSF 88-331)

TABLE 5-3

DOCTORAL SCIENTISTS AND ENGINEERS WHO ARE COLLEGE OR UNIVERSITY TEACHERS BY FIELD, RANK AND SEX, 1987

	Total(1)			Professor			Asso. Prof.			Asst. Prof.			Instructor			Lecturer		
FIELD	No.	W	%W	No.	W	%W	No.	W	%W	No.	W	%W	No.	W	%W	No.	W	%W
All Fields	156739	24958	15.9	72543	5234	7.2	44282	7670	17.3	30483	8652	28.4	1129	542	48.0	2032	849	41.8
Scientists	139139	24524	17.6	62843	5179	8.2	40041	7536	18.8	27432	8453	30.8	1095	542	28.5	1904	835	43.9
Chemists	11771	1233	10.5	6690	370	5.5	2578	313	12.1	1591	331	20.8	75	13	17.3	187	85	47.8
Physicists/Astronomers	8481	343	4.0	5134	101	2.0	1807	79	4.4	1161	119	10.2	6	3	50.0	107	17	15.9
Mathematical Scientists	12052	1097	4.1	6067	263	2.2	3094	339	4.8	2394	418	7.1	157	19	6.4	142	27	10.6
Computer/Information Sp.	3983	371	9.3	1055	51	4.8	1523	118	7.7	1168	178	15.2	17	6	35.3	82	5	6.1
Earth Scientists	3962	323	8.2	1955	41	2.1	964	75	7.8	801	131	16.4	8	2	25.0	39	16	41.0
Oceanographers	739	62	3.1	241	3	0.8	221	23	4.1	233	32	4.3	12		0.0			
Atmospheric Scientists	467	23	4.9	131		0.0	186	14	7.5	113	7	6.2				7		0.0
Biological Scientists	27504	5405	19.7	12294	1121	9.1	7491	1641	21.9	5390	1548	28.7	331	179	54.1	233	150	64.4
Agricultural Scientists	4832	326	6.7	2440	59	2.4	1358	65	4.8	780	149	19.1				12	3	25.0
Medical Scientists	10055	3188	31.7	3562	552	15.5	3136	1103	35.2	2541	1248	49.1	180	56	31.1	51	41	80.4
Psychologists	17166	4942	28.8	7518	1104	14.7	5157	1494	29.0	3372	1653	49.0	126	112	88.9	261	217	83.1
Economists	10407	1099	10.6	4814	297	6.2	2859	312	10.9	2328	328	14.1	88	57	64.8	143	29	20.3
Sociologists/Anthro.	8414	2447	29.1	3300	550	16.7	2831	756	26.7	1790	886	49.5	69	69	100.0	217	98	45.2
Other Social Scientists	19306	3665	19.0	7642	667	8.7	6736	1204	17.9	3770	1425	37.8	26	26	100.0	423	147	34.8
Engineers	17600	434	2.5	9700	55	0.6	4241	134	3.2	3051	199	6.5	34		0.0	128	14	10.9

(1) Includes "Other" and "No Report". Blanks indicate no cases reported.

SOURCE: Biennial Survey of Doctorates, 1987, National Research Council, unpublished.

TABLE 5-4

TENURE STATUS OF ACADEMICALLY EMPLOYED SCIENCE/ENGINEERING DOCTORATES BY FIELD OF PhD AND SEX, 1987

Field	Number(1)			% Tenured		% In Tenure Track		% Not In Tenure Tr.	
	Men	Women	%W	Men	Women	Men	Women	Men	Women
All S/E Fields	174514	34870	16.7	59.8	36.1	14.1	22.0	7.2	17.5
Chemists	13306	1798	11.9	64.4	34.1	8.8	13.5	6.0	21.0
Physicists/Astronomers	13040	585	4.3	51.2	28.4	8.0	18.5	8.0	16.9
Mathematical Scientists	11802	1229	9.4	70.7	52.0	14.3	26.9	4.1	8.2
Computer/Information Sp.	4880	559	10.3	42.2	26.8	25.9	33.3	7.4	7.9
Environmental Scientists	6790	585	7.9	54.3	26.0	15.4	25.1	8.4	20.9
Biological Scientists	31377	9039	22.4	56.1	28.3	13.9	17.0	10.1	24.2
Agricultural Scientists	8053	601	6.9	65.2	26.6	15.1	31.1	7.1	18.0
Medical Scientists	11148	4520	28.8	46.3	32.0	17.4	17.2	11.8	10.0
Psychologists	15321	6691	30.4	62.6	37.7	11.3	20.3	8.0	15.5
Social Scientists	35724	8698	19.6	67.5	46.4	14.7	23.1	4.9	13.6
Engineers	23073	565	2.4	57.7	25.5	16.6	40.9	5.2	12.7

(1) Includes "Other" and "No Report".

SOURCE: Biennial Survey of Doctorates 1987, National Research Council unpublishe

TABLE 5-5

TENURE STATUS OF ACADEMICALLY EMPLOYED SCIENCE/ENGINEERING PHDS, 198

	TOTAL EMPLOYED				TENURED			IN TENURE TRACK			NOT IN TENURE TR		
FIELD and MINORITY	Number	No Wom	% Wo	V%	Number	H%	V%	Number	H%	V%	Number	H%	V%
All Fields	209,384	34870	16.7	100	116,941	55.9	100	32,211	15.4	100	18,610	8.9	100
White	187,937	31235	16.6	89.8	107,482	57.2	91.9	28,220	15.0	87.6	16,232	8.6	87.2
Black	3,699	1084	29.3	1.8	1,636	44.2	1.4	861	23.3	2.7	304	8.2	1.6
Am. Indian/Aleut	316	54	17.1	0.2	205	64.9	0.2	44	13.9	0.1	14	4.4	0.1
Asian/Pacific Isl.	16,021	2319	14.5	7.7	6,848	42.7	5.9	2,816	17.6	8.7	1,964	12.3	10.6
Hispanic	3,472			1.7	1,561	45.0	1.3	664	19.1	2.1	377	10.9	2.0
Scientists	185,746	34305	18.5	100	103,492	55.7	100	28,143	15.2	100	17,342	9.3	100
White	168,292	30767	18.3	80.4	95,734	56.9	81.9	25,272	15.0	78.5	15,292	9.1	82.2
Black	3,441	1073	31.2	1.6	1,581	45.9	1.4	669	19.4	2.1	299	8.7	1.6
Am. Indian/Aleut	301	54	17.9	0.1	205	68.1	0.2	44	14.6	0.1	12	4.0	0.1
Asian/Pacific Isl.	12,411	2236	18.0	5.9	5,251	42.3	4.5	1,911	15.4	5.9	1,660	13.4	8.9
Hispanic	3,047			1.6	1,281	42.0	1.2	625	20.5	2.2	374	12.3	2.2
Physical Scientists	28,729	2383	8.3	100	16,028	55.8	100	2,541	8.8	100	2,327	8.1	100
White	25,673	2011	7.8	89.4	14,895	58.0	92.9	2,246	8.7	88.4	1,917	7.5	82.4
Black	284	37	13.0	1.0	98	34.5	0.6	44	15.5	1.7	47	16.5	2.0
Am. Indian/Aleut	69	3	4.3	0.2	63	91.3	0.4	4	5.8	0.2		0.0	0.0
Asian/Pacific Isl.	2,551	323	12.7	8.9	895	35.1	5.6	227	8.9	8.9	363	14.2	15.6
Hispanic	453			1.6	227	50.1	1.4	38	8.4	1.5	47	10.4	2.0
Mathematical Scientists	13,031	1229	9.4	100	8,984	68.9	100	2,022	15.5	100	584	4.5	100
White	11,656	1025	8.8	89.4	8,289	71.1	92.3	1,730	14.8	85.6	414	3.6	70.9
Black	140	29	20.7	1.1	110	78.6	1.2	10	7.1	0.5	2	1.4	0.3
Am. Indian/Aleut	6	3	50.0	0.0				6	100.0	0.3			
Asian/Pacific Isl.	1,176	168	14.3	9.0	558	47.4	6.2	255	21.7	12.6	168	14.3	28.8
Hispanic	213			1.6	94	44.1	1.0	92	43.2	4.5	14	6.6	2.4
Environmental Scientists	7,375	585	7.9	100	3840	52.1	100	1,192	16.2	100	690	9.4	100
White	6,927	523	7.6	93.9	3682	53.2	95.9	1,109	16.0	93.0	635	9.2	92.0
Black	69	3	4.3	0.9	3	4.3	0.1	17	24.6	1.4	6	8.7	0.9
Am. Indian/Aleut	3	1	33.3	0.0				2	66.7	0.2			
Asian/Pacific Isl.	361	55	15.2	4.9	148	41.0	3.9	61	16.9	5.1	44	12.2	6.4
Hispanic	144			2.0	64	44.4	1.7	20	13.9	1.7	17	11.8	2.5
Life Scientists	64,738	14719	22.7	100	32179	49.7	100	10,589	16.4	100	8,121	12.5	100
White	58,196	13107	22.5	89.9	29685	51.0	92.2	9,639	16.6	91.0	7,117	12.2	87.6
Black	982	326	33.2	1.5	416	42.4	1.3	193	19.7	1.8	92	9.4	1.1
Am. Indian/Aleut	74	26	35.1	0.1	31	41.9	0.1	10	13.5	0.1	12	16.2	0.1
Asian/Pacific Isl.	5,124	1188	23.2	7.9	1899	37.1	5.9	670	13.1	6.3	872	17.0	10.7
Hispanic	959			1.5	348	36.3	1.1	201	21.0	1.9	135	14.1	1.7
Social/Behav. Sci.	66,434	15389	23.2	100	40253	60.6	100	10,347	15.6	100	5,216	7.9	100
White	60,953	14101	23.1	91.7	37140	60.9	92.3	9,321	15.3	90.1	4,844	7.9	92.9
Black	1,955	678	34.7	2.9	948	48.5	2.4	402	20.6	3.9	152	7.8	2.9
Am. Indian/Aleut	149	21	14.1	0.2	110	73.8	0.3	22	14.8	0.2			
Asian/Pacific Isl.	3,197	502	15.7	4.8	1751	54.8	4.3	698	21.8	6.7	215	6.7	4.1
Hispanic	1,141			1.7	449	39.4	1.1	254	22.3	2.5	155	13.6	3.0
Engineers	23,638	565	2.4	100	13449	56.9	100	4,068	17.2	100	1,268	5.4	100
White	19,645	468	2.4	83.1	11748	59.8	87.4	2,948	15.0	72.5	940	4.8	74.1
Black	258	11	4.3	1.1	55	21.3	0.4	192	74.4	4.7	5	1.9	0.4
Am. Indian/Aleut	15		0.0	0.1							2	13.3	0.2
Asian/Pacific Isl.	3,610	83	2.3	15.3	1597	44.2	11.9	905	25.1	22.2	304	8.4	24.0
Hispanic	425			1.8	280	65.9	2.1	39	9.2	1.0	3	0.7	0.2

(1) Includes "Other" and "No Report". Blanks indicate no cases reported.

SOURCE: Humanities Doctorates in the United States: 1987 Profile, National Research Council

TABLE 5-6

ACADEMICALLY EMPLOYED HUMANITIES DOCTORATES, BY ACADEMIC POSITION, FIELD AND SEX, 1987

Year of Ph.D. and Academic Position	All Fields		Field of Doctorate							
			Eng/Amer Lang and Lit		History		Other Lang and Lit		Other Humanities	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Total, 1944-1986 Ph.D.s (N)	46,700	19,400	11,300	6,200	12,500	2,400	7,800	5,300	15,100	5,500
Faculty	90.5	80.2	91.1	78.2	87.8	80.5	92.6	80.9	91.2	81.8
Professor	48.3	23.9	52.1	27.1	54.7	29.8	41.5	21.0	43.6	20.4
Associate Professor	27.7	26.7	26.2	25.9	21.9	23.7	32.8	29.3	31.1	26.5
Assistant Professor	12.9	25.4	11.1	19.4	9.5	22.9	16.9	27.2	15.0	31.8
Instructor	1.6	4.2	1.6	5.8	1.8	4.0	1.3	3.4	1.5	3.2
Lecturer	1.1	5.1	1.2	7.7	0.7	2.8	2.1	5.2	0.9	3.1
Adjunct	2.1	5.4	1.3	4.9	3.5	6.9	1.6	4.3	1.8	6.3
Other Faculty	2.7	3.5	2.8	2.8	4.3	3.2	1.5	3.9	1.8	4.2
Does Not Apply	2.4	3.3	2.6	3.8	2.8	4.3	1.3	3.0	2.5	2.7
Postdoctoral Appointment	0.6	1.4	0.6	1.7	0.4	1.7	0.5	1.5	0.7	0.7
No Report	0.7	1.0	0.4	0.8	0.5	0.6	0.5	1.2	1.1	1.1
Total, 1981-1986 Ph.D.s (N)	6,800	5,600	1,400	1,600	1,300	600	1,100	1,300	2,900	2,100
Faculty	79.5	70.9	74.2	59.0	79.0	72.7	84.2	73.1	80.4	78.0
Professor	5.9	3.4	4.5	5.3	12.1	2.9	2.8	2.2	5.1	2.8
Associate Professor	15.2	8.8	11.8	5.5	5.0	10.7	12.1	6.9	22.8	11.8
Assistant Professor	54.2	52.1	53.5	36.8	53.6	52.6	66.1	59.4	50.2	59.1
Instructor	4.1	6.6	4.5	11.5	8.4	6.5	3.2	4.6	2.4	4.3
Lecturer	4.0	8.4	7.3	16.1	2.1	4.7	5.0	7.4	2.9	4.3
Adjunct	2.9	9.0	4.1	10.7	0.6	8.9	0.5	8.4	4.2	8.0
Other Faculty	4.8	3.7	6.2	5.1	8.4	0.2	6.6	2.9	1.7	4.2
Does Not Apply	4.7	3.8	3.6	5.3	5.8	5.0	1.9	2.4	5.9	3.1
Postdoctoral Appointment	2.7	2.8	4.3	3.8	2.3	6.2	1.7	3.3	2.5	0.7
No Report	1.4	1.5	0.2	0.0	1.8	2.3	0.0	2.4	2.3	1.7

NOTE: Other Languages & Literature = Classical Languages and Modern Languages and Literature. Other Humanities = Art History, Music, Speech/Theater, Philosophy, and "Other Humanities."

SOURCE: Humanities Doctorates in the United States: 1987 Profile, National Research Council

TABLE 5-7

TENURE STATUS OF ACADEMICALLY EMPLOYED HUMANITIES PHDS BY FIELD, AGE AND SEX, 1987

Age and Tenure	All Fields		Field of Doctorate							
			Eng/Amer Lang and Lit		History		Other Lang and Lit		Other Humanities	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Total Employed (N)	46,700	19,400	11,300	6,200	12,500	2,400	7,800	5,300	15,100	5,500
Tenured	73.6	49.1	75.4	52.2	73.2	50.6	74.3	48.3	72.2	45.6
Not Tenured	23.8	46.9	22.3	43.8	24.8	47.5	22.3	47.7	24.9	49.5
Tenure Track	10.3	18.6	10.6	14.2	7.2	19.0	11.9	20.8	11.8	21.5
Non-Tenure Track	4.4	13.6	1.8	13.3	5.2	11.0	4.6	13.5	5.4	15.2
Tenure Not Applicable	9.2	14.7	9.9	16.4	12.4	17.5	5.8	13.5	7.6	12.8
No Report	2.6	4.0	2.3	4.0	2.0	2.0	3.5	4.0	2.9	4.9
Age 35 and Under (N)	2,400	2,000	600	600	400	200	400	500	1,000	700
Tenured	12.1	5.0	5.4	6.2	1.3	0.0	13.7	4.6	17.5	5.8
Not Tenured	84.5	91.2	94.6	88.7	92.7	99.1	86.3	88.9	74.8	92.5
Tenure Track	57.1	55.7	69.5	56.7	48.8	76.6	62.5	48.2	50.6	53.5
Non-Tenure Track	17.2	22.1	15.6	14.3	29.4	0.0	20.5	28.2	12.4	32.1
Tenure Not Applicable	10.3	13.3	9.6	17.7	14.4	22.5	3.3	12.5	11.8	6.9
No Report	3.4	3.9	0.0	5.2	6.0	0.9	0.0	6.5	5.7	1.8
Age 36 to 45 (N)	14,900	7,900	3,700	2,100	3,400	900	2,500	2,300	5,300	2,500
Tenured	59.9	42.0	68.4	46.2	48.5	42.6	63.2	39.9	59.8	40.2
Not Tenured	37.0	54.0	27.1	50.4	49.2	55.9	34.9	56.2	37.2	54.4
Tenure Track	18.7	23.9	17.9	17.0	17.5	23.6	21.4	29.6	18.6	24.8
Non-Tenure Track	8.2	16.5	2.5	17.1	13.1	19.0	8.1	14.7	9.1	16.6
Tenure Not Applicable	10.1	13.6	6.7	16.3	18.5	13.2	5.4	12.0	9.4	13.1
No Report	3.1	3.9	4.5	3.4	2.3	1.5	1.9	3.9	3.1	5.4
Age 46 and Older (N)	29,200	9,500	6,900	3,500	8,700	1,300	4,900	2,500	8,600	2,200
Tenured	85.8	64.4	85.2	63.8	86.0	65.0	84.9	64.9	86.5	64.3
Not Tenured	11.9	31.6	13.5	32.0	12.3	32.5	10.5	31.5	11.0	30.7
Tenure Track	2.1	6.3	1.5	5.0	1.3	5.7	3.0	7.1	2.9	7.9
Non-Tenure Track	1.3	9.3	0.2	10.8	1.1	6.9	1.5	9.2	2.3	8.6
Tenure Not Applicable	8.5	16.0	11.8	16.2	9.9	19.9	6.0	15.2	5.9	14.2
No Report	2.3	4.0	1.3	4.2	1.7	2.5	4.5	3.6	2.5	5.0

NOTE: Other Languages & Literature = Classical Languages and Modern Languages and Literature. Other Humanities = Art History, Music, Speech/Theater, Philosophy, and "Other Humanities."

SOURCE: Digest of Education Statistics 1988, National Center for Education Statistics

TABLE 5-8

FULL TIME INSTRUCTIONAL FACULTY IN HIGHER EDUCATION, BY RACE/ETHNICITY, ACADEMIC RANK AND SEX, FALL 1983

Academic rank or sex	Total	Race/ethnicity				
		White non-Hispanic	Black non-Hispanic	Hispanic	Asian or Pacific Islander	American Indian/ Alaskan Native
1	2	3	4	5	6	7
Men and women, all ranks	**470,673**	**425,691**	**19,451**	**7,356**	**16,868**	**1,307**
Professors	128,142	119,219	2,857	1,369	4,466	231
Associate professors	111,887	102,246	3,969	1,604	3,784	284
Assistant professors	113,330	100,176	5,847	2,008	5,002	297
Instructors	82,211	73,206	5,117	1,793	1,741	354
Lecturers	9,480	8,274	618	220	330	38
Other faculty	25,623	22,570	1,043	362	1,545	103
Men, all ranks	**343,780**	**313,424**	**10,540**	**5,172**	**13,692**	**952**
Professors	114,072	106,554	2,034	1,137	4,151	196
Associate professors	87,176	80,100	2,461	1,210	3,176	229
Assistant professors	74,166	65,692	2,964	1,389	3,905	216
Instructors	47,258	42,595	2,314	1,075	1,055	219
Lecturers	5,219	4,584	301	110	201	23
Other faculty	15,889	13,899	466	251	1,204	69
Women, all ranks	**126,893**	**112,267**	**8,911**	**2,184**	**3,176**	**355**
Professors	14,070	12,665	823	232	315	35
Associate professors	24,711	22,146	1,508	394	608	55
Assistant professors	39,164	34,484	2,883	619	1,097	81
Instructors	34,953	30,611	2,803	718	686	135
Lecturers	4,261	3,690	317	110	129	15
Other faculty	9,734	8,671	577	111	341	34

NOTE.—Data exclude faculty employed by system offices.

SOURCE: U.S. Equal Employment Opportunity Commission, Higher Education Staff Information Report File, 1985, unpublished data

TABLE 5-9

FULL TIME INSTRUCTIONAL FACULTY IN INSTITUTIONS OF HIGHER EDUCATION BY RACE/ETHNICITY, ACADEMIC RANK, AND SEX, FALL 1985

Academic rank and sex	Total	Race/ethnicity				
		White non-Hispanic	Black non-Hispanic	Hispanic	Asian or Pacific Islander	American Indian/ Alaskan Native
1	2	3	4	5	6	7
Men and women, all ranks	464,072	417,036	19,227	7,704	18,370	1,735
Professors	129,269	119,868	2,859	1,455	4,788	299
Associate professors	111,092	100,630	4,201	1,727	4,130	404
Assistant professors	111,308	97,496	5,895	1,968	5,469	480
Instructors	75,411	66,799	4,572	1,798	1,806	436
Lecturers	9,766	8,477	631	251	360	47
Other faculty	27,226	23,766	1,069	505	1,817	69
Men, all ranks	336,009	303,953	10,456	5,360	14,846	1,394
Professors	114,258	106,335	2,058	1,206	4,395	264
Associate professors	85,156	77,483	2,595	1,280	3,451	347
Assistant professors	71,463	62,582	2,923	1,316	4,240	402
Instructors	43,251	38,592	2,107	1,141	1,105	306
Lecturers	5,098	4,436	304	117	212	29
Other faculty	16,783	14,525	469	300	1,443	46
Women, all ranks	128,063	113,083	8,771	2,344	3,524	341
Professors	15,011	13,533	801	249	393	35
Associate professors	25,936	23,147	1,606	447	679	57
Assistant professors	39,845	34,914	2,972	652	1,229	78
Instructors	32,160	28,207	2,465	657	701	130
Lecturers	4,668	4,041	327	134	148	18
Other faculty	10,443	9,241	600	205	374	23

NOTE.--Data exclude faculty employed by system offices. Totals may differ from figures reported on other tables because of varying survey methodologies.

SOURCE: Digest of Education Statistics 1988, National Center for Education Statistics

TABLE 5-10

FULL-TIME INSTRUCTIONAL FACULTY WITH TENURE FOR INSTITUTIONS REPORTING TENURE STATUS BY RANK, SEX AND CONTROL, SELECTED YEARS 1980-81 - 1985-86

Academic year, type, and control of institution	Percent with tenure, by rank							Percent with tenure, by sex	
	All ranks	Professor	Associate professor	Assistant professor	Instructor	Lecturer	No academic rank	Men	Women
1	2	3	4	5	6	7	8	9	10
1980-81									
All institutions	64.8	95.8	82.9	27.9	9.2	11.9	77.4	70.0	49.7
4-year	62.7	95.8	82.2	24.1	6.6	10.7	24.7	68.3	44.0
University	64.5	96.7	83.7	15.3	5.4	4.3	3.5	70.0	41.0
Other 4-year	61.3	94.9	81.2	29.7	7.1	17.8	32.4	67.0	46.5
2-year	74.5	95.6	89.2	58.9	19.8	34.8	81.1	78.8	66.6
Public institutions	68.0	96.6	85.9	32.5	11.8	14.3	79.4	72.8	54.0
4-year	65.7	96.6	85.3	27.6	8.7	12.8	12.2	71.1	47.5
University	66.0	96.9	86.5	16.8	6.1	4.9	4.5	71.3	42.8
Other 4-year	65.5	96.3	84.4	35.5	10.0	21.4	17.2	70.9	50.2
2-year	75.2	95.9	89.5	59.5	20.3	35.8	81.8	79.3	67.5
Private institutions	55.9	93.8	75.2	17.5	3.0	1.5	43.4	62.2	37.2
4-year	56.0	93.8	75.2	17.4	2.8	1.5	37.5	62.2	37.2
University	60.4	96.3	75.8	11.5	3.5	1.8	0.6	66.3	36.5
Other 4-year	53.6	92.0	74.9	20.2	2.6	1.2	43.4	59.8	37.4
2-year	49.5	84.7	77.3	35.2	8.8	0.0	52.2	57.3	39.5
1982-83									
All institutions	65.4	95.6	82.1	26.8	9.0	11.0	77.2	70.4	51.0
4-year	63.2	95.6	81.4	23.1	6.2	9.8	23.6	68.9	45.2
University	65.5	96.8	83.8	14.6	4.9	3.6	0.7	70.9	42.9
Other 4-year	61.6	94.4	79.8	28.4	6.7	16.3	32.7	67.3	48.4
2-year	75.0	96.3	88.9	58.4	19.9	32.3	81.2	78.9	68.2
Public institutions	68.9	96.4	85.5	31.8	11.3	13.3	79.2	73.6	56.7
4-year	66.7	96.5	84.9	27.0	7.9	11.9	11.1	72.0	49.0
University	67.5	97.2	87.0	16.5	5.5	4.3	0.9	72.7	45.0
Other 4-year	66.1	95.7	83.3	34.6	9.0	19.1	19.4	71.4	51.4
2-year	75.7	95.7	89.1	59.0	20.3	32.6	81.7	79.4	69.0
Private institutions	55.9	93.4	73.8	16.3	3.6	1.2	43.3	62.0	38.1
4-year	56.0	93.5	73.8	16.1	3.2	1.2	35.8	62.1	38.0
University	60.3	95.8	74.9	10.3	3.2	1.4	0.0	66.0	37.8
Other 4-year	53.7	91.9	73.2	18.8	3.2	0.9	40.9	59.8	38.1
2-year	49.9	78.9	77.2	35.6	13.7	0.0	56.7	56.8	42.2
1984-85									
All institutions	66.0	95.8	82.3	25.6	14.9	10.7	76.4	71.1	51.8
4-year	64.0	95.8	81.6	22.0	5.7	8.9	20.7	69.7	46.3
University	66.6	97.0	84.7	13.5	5.2	2.9	0.4	72.0	44.6
Other 4-year	62.2	94.7	79.5	27.3	5.9	14.7	28.5	67.9	47.2
2-year	75.2	95.2	88.7	56.7	38.2	40.3	81.6	78.9	68.9
Public institutions	69.0	96.5	85.4	30.0	18.6	12.9	78.9	73.8	56.1
4-year	67.0	96.6	84.9	25.3	7.4	10.7	11.1	72.4	48.7
University	67.9	97.1	87.4	14.7	5.8	3.6	0.5	73.3	46.0
Other 4-year	66.2	96.1	82.9	32.5	8.2	16.9	19.7	71.5	51.9
2-year	75.8	96.3	89.0	57.4	38.6	43.7	82.1	79.4	69.8
Private institutions	57.4	93.8	74.4	16.0	3.5	1.2	37.7	63.7	39.7
4-year	57.5	93.8	74.4	15.8	2.2	1.1	30.1	63.8	39.6
University	62.7	96.8	76.5	10.3	3.0	1.0	0.0	68.4	40.6
Other 4-year	54.9	91.8	73.4	18.2	2.1	1.3	33.8	61.1	39.3
2-year	51.2	91.8	72.5	33.6	28.9	5.6	56.4	58.2	41.7
1985-86									
All institutions	66.0	95.8	82.2	25.1	10.7	9.3	75.3	71.3	51.7
4-year	64.1	95.8	81.5	21.5	5.7	8.3	20.0	69.9	46.4
University	66.8	97.0	85.0	13.0	5.0	3.2	0.3	72.3	45.4
Other 4-year	62.2	94.8	79.2	26.6	6.0	13.0	27.0	68.1	46.8
2-year	75.1	95.1	88.5	56.4	27.3	28.6	80.4	79.1	68.5
Public institutions	68.9	96.5	85.4	29.1	13.4	10.9	77.2	73.9	56.6
4-year	66.9	96.6	84.9	24.4	7.3	9.7	11.1	72.5	49.3
University	68.1	97.1	87.8	14.0	5.8	3.4	0.3	73.5	46.4
Other 4-year	66.0	96.2	82.7	31.8	8.0	15.0	18.3	71.6	51.1
2-year	75.7	95.2	89.0	57.4	28.0	28.7	80.8	79.5	69.2
Private institutions	57.6	93.8	73.8	16.0	2.7	2.1	40.3	63.9	40.3
4-year	57.7	93.9	73.9	15.9	2.5	2.1	32.1	64.0	40.3
University	63.0	96.7	76.6	10.1	2.2	2.8	0.0	68.4	42.7
Other 4-year	55.1	92.0	72.6	18.3	2.5	1.0	34.6	61.6	39.5
2-year	48.4	89.9	63.6	24.9	9.3	0.0	57.5	56.1	39.3

SOURCE: National Center For Education Statistics

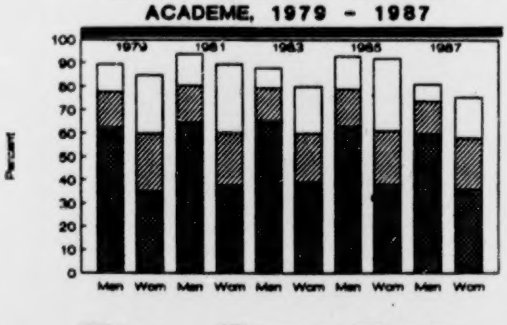
TABLE 5-11

FULL-TIME INSTRUCTIONAL FACULTY, NUMBER & PERCENT TENURED BY SEX AND ACADEMIC RANK, 1985-86

Rank	Total	Men	Women	%W
	Total Faculty			
All Ranks Combined	390,731	281,212	109,519	28.0
Professor	116,156	102,354	13,802	11.9
Associate Prof	96,516	73,039	23,477	24.3
Assistant Prof	88,176	54,679	33,497	38.0
Inctructor	26,387	12,655	13,732	52.0
Lecturer	6,976	3,570	3,406	48.8
No Academic Rank	56,520	34,915	21,605	38.2
	Tenured Faculty			
All Ranks Combined	236,783	186,650	50,133	21.2
Professor	109,385	96,718	12,667	11.6
Associate Prof	77,344	58,709	18,635	24.1
Assistant Prof	21,379	12,647	8,732	40.8
Inctructor	2,607	1,438	1,169	44.8
Lecturer	642	336	306	47.7
No Academic Rank	25,426	16,802	8,624	33.9
	Percent Faculty With Tenure			
All Ranks Combined	60.6	66.4	45.8	
Professor	94.2	94.5	91.8	
Associate Prof	80.1	80.4	79.4	
Assistant Prof	24.2	23.1	26.1	
Inctructor	9.9	11.4	8.5	
Lecturer	9.2	9.4	9.0	
No Academic Rank	45.0	48.1	39.9	

CHART 5-1

TENURE STATUS OF PhD S/Es IN ACADEME, 1979 - 1987



Source: NRC

SOURCE: Selected Data on Graduate Science/Engineering Students and Postdoctorates Fall 1987, National Science Foundation

TABLE 5-12

SCIENCE AND ENGINEERING POSTDOCTORATES AND OTHER NONFACULTY RESEARCH STAFF IN PHD GRANTING INSTITUTIONS BY FIELD AND SEX, 1987

FIELD	POSTDOCTORATES			OTHER NONFACULTY DOCTORAL RESEARCH STAFF		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
TOTAL, ALL FIELDS	25,270	18,720	6,550	4,609	3,346	1,263
ENGINEERING	1,479	1,328	151	453	408	45
AEROSPACE	43	39	4	28	28	0
AGRICULTURAL	31	27	4	5	5	0
BIOMEDICAL	44	37	7	4	4	0
CHEMICAL	310	274	36	48	36	12
CIVIL	164	153	11	38	37	1
ELECTRICAL	214	195	19	66	64	2
ENGINEERING SCIENCE	44	41	3	26	23	3
INDUSTRIAL	26	25	1	20	16	4
MECHANICAL	216	205	11	83	77	6
METALLURGICAL/MATERIALS	285	240	45	96	83	13
MINING	26	26	0	1	1	0
NUCLEAR	20	17	3	24	22	2
PETROLEUM	10	10	0	2	1	1
ENGINEERING, N.E.C.	46	39	7	12	11	1
SCIENCES, TOTAL	23,791	17,392	6,399	4,156	2,938	1,218
PHYSICAL SCIENCES	4,740	4,095	645	844	733	111
ASTRONOMY	106	93	13	66	58	8
CHEMISTRY	3,038	2,532	506	395	315	80
PHYSICS	1,562	1,439	123	380	357	23
PHYSICAL SCIENCES, N.E.C.	34	31	3	3	3	0
ENVIRONMENTAL SCIENCES	421	358	63	197	167	30
ATMOSPHERIC SCIENCES	58	53	5	44	43	1
GEOSCIENCES	239	208	31	114	94	20
OCEANOGRAPHY	81	65	16	37	29	8
ENVIRONMENTAL SCIENCES, N.E.C.	43	32	11	2	1	1
MATHEMATICAL SCIENCES	228	196	32	69	55	14
COMPUTER SCIENCES	110	86	24	122	108	14
LIFE SCIENCES	17,443	12,135	5,308	2,583	1,687	896
AGRICULTURAL SCIENCES	453	352	101	113	96	17
BIOLOGICAL SCIENCES	10,522	7,152	3,370	1,544	1,006	538
ANATOMY	350	224	126	79	55	24
BIOCHEMISTRY	2,090	1,420	670	294	187	107
BIOLOGY	1,189	818	371	319	200	119
BIOMETRY/EPIDEMIOLOGY	78	42	36	11	6	5
BIOPHYSICS	116	88	28	11	8	3
BOTANY	428	289	139	61	43	18
CELL BIOLOGY	965	642	323	87	59	28
ECOLOGY	39	33	6	22	19	3
ENTOMOLOGY/PARASITOLOGY	162	123	39	31	24	7
GENETICS	497	318	179	80	51	29
MICROBIOLOGY	1,314	864	450	134	75	59
NUTRITION	177	124	53	45	32	13
PATHOLOGY	765	521	244	88	63	25
PHARMACOLOGY	909	627	282	99	60	39
PHYSIOLOGY	1,029	739	290	135	95	40
ZOOLOGY	214	141	73	37	24	13
BIOSCIENCES, N.E.C.	200	139	61	11	5	6
HEALTH SCIENCES	6,468	4,631	1,837	926	585	341
DENTISTRY	105	81	24	11	10	1
NEUROLOGY	486	335	151	69	51	18
NURSING	49	5	44	8	1	7
PHARMACEUTICAL SCIENCES	407	302	105	55	41	14
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	170	111	59	35	18	17
SPEECH PATHOLOGY/AUDIOLOGY	25	9	16	17	5	12
VETERINARY SCIENCES	132	89	43	29	21	8
CLINICAL MEDICINE, N.E.C.	4,930	3,595	1,335	676	422	254
HEALTH RELATED, N.E.C.	164	104	60	26	16	10
PSYCHOLOGY	454	262	192	256	132	124
SOCIAL SCIENCES	395	260	135	85	56	29
AGRICULTURAL ECONOMICS	31	29	2	4	4	0
ANTHROPOLOGY	54	34	20	32	18	14
ECONOMICS (EXCEPT AGRICULTURAL)	36	31	5	1	1	0
GEOGRAPHY	18	12	6	1	1	0
HISTORY AND PHILOSOPHY OF SCIENCE	19	12	7	4	4	0
LINGUISTICS	42	24	18	19	10	9
POLITICAL SCIENCE	54	41	13	2	2	0
SOCIOLOGY	98	49	49	18	14	4
SOCIOLOGY/ANTHROPOLOGY	3	2	1	0	0	0
SOCIAL SCIENCES, N.E.C.	40	26	14	4	2	2

SOURCE: Selected Data on Graduate Science/Engineering Students and Postdoctorates Fall 1987, National Science Foundation

TABLE 5-13

SCIENCE AND ENGINEERING POSTDOCTORATES IN PHD GRANTING INSTITUTIONS BY FIELD AND CITIZENSHIP, 1984-87

FIELD	U.S. CITIZENS				FOREIGN CITIZENS			
	1984	1985	1986	1987	1984	1985	1986	1987
TOTAL, ALL FIELDS	13,586	13,670	14,260	14,475	8,001	8,928	9,775	10,795
ENGINEERING	435	442	461	513	760	907	941	966
AEROSPACE	10	10	15	13	32	41	33	30
AGRICULTURAL	4	6	4	7	4	9	13	24
BIOMEDICAL	21	27	36	32	13	20	16	12
CHEMICAL	65	55	63	67	180	218	232	243
CIVIL	53	49	46	52	93	73	94	112
ELECTRICAL	61	76	59	124	110	100	113	90
ENGINEERING SCIENCE	25	41	28	21	38	49	39	23
INDUSTRIAL	12	18	22	19	10	2	7	7
MECHANICAL	82	61	94	69	114	141	145	147
METALLURGICAL/MATERIALS	52	47	56	71	116	198	193	214
MINING	18	19	19	20	0	0	6	6
NUCLEAR	7	12	9	7	12	19	22	13
PETROLEUM	1	1	0	1	3	5	1	9
ENGINEERING, N.E.C.	24	20	10	10	35	32	27	36
SCIENCES, TOTAL	13,151	13,228	13,799	13,962	7,241	8,021	8,834	9,829
PHYSICAL SCIENCES	1,974	2,016	2,203	2,100	2,412	2,501	2,640	2,640
ASTRONOMY	86	95	88	68	32	43	45	38
CHEMISTRY	1,250	1,277	1,292	1,178	1,656	1,718	1,859	1,860
PHYSICS	612	609	796	825	708	733	731	737
PHYSICAL SCIENCES, N.E.C.	26	35	27	29	16	7	5	5
ENVIRONMENTAL SCIENCES	324	250	276	257	164	125	142	164
ATMOSPHERIC SCIENCES	51	33	32	40	23	15	11	18
GEOSCIENCES	142	136	158	134	108	90	89	105
OCEANOGRAPHY	121	64	67	56	30	15	31	25
ENVIRONMENTAL SCIENCES, N.E.C.	10	17	19	27	3	5	11	16
MATHEMATICAL SCIENCES	103	112	100	118	100	114	101	110
COMPUTER SCIENCES	42	45	45	76	21	29	29	34
LIFE SCIENCES	10,079	10,120	10,478	10,724	4,394	5,071	5,745	6,719
AGRICULTURAL SCIENCES	256	215	225	282	102	142	163	171
BIOLOGICAL SCIENCES	5,944	6,015	6,175	6,362	2,796	3,214	3,636	4,160
ANATOMY	218	234	239	219	64	76	103	131
BIOCHEMISTRY	1,094	1,057	1,166	1,185	709	835	838	905
BIOLOGY	836	848	735	809	291	280	366	380
BIOMETRY/EPIDEMIOLOGY	58	46	65	53	9	13	34	25
BIOPHYSICS	74	72	79	59	47	29	54	57
BOTANY	260	268	284	306	87	103	110	122
CELL BIOLOGY	444	492	529	609	204	239	298	356
ECOLOGY	32	29	28	32	4	8	9	7
ENTOMOLOGY/PARASITOLOGY	92	103	98	120	21	36	45	42
GENETICS	266	263	285	334	116	114	143	163
MICROBIOLOGY	743	738	747	748	328	430	512	566
NUTRITION	91	119	100	99	59	83	85	78
PATHOLOGY	437	398	439	441	170	223	270	324
PHARMACOLOGY	501	540	543	478	315	321	342	431
PHYSIOLOGY	552	535	575	604	265	305	331	425
ZOOLOGY	129	179	176	162	28	33	41	52
BIOSCIENCES, N.E.C.	117	94	87	104	79	86	55	96
HEALTH SCIENCES	3,879	3,890	4,078	4,080	1,496	1,715	1,946	2,388
DENTISTRY	127	157	75	65	59	67	44	40
NEUROLOGY	248	225	243	298	104	107	142	188
NURSING	14	16	16	48	0	1	0	1
PHARMACEUTICAL SCIENCES	108	123	170	136	161	195	214	271
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	129	130	132	124	39	37	62	46
SPEECH PATHOLOGY/AUDIOLOGY	17	16	10	23	1	2	2	2
VETERINARY SCIENCES	68	51	68	100	10	18	32	32
CLINICAL MEDICINE, N.E.C.	3,075	3,064	3,230	3,165	1,097	1,258	1,405	1,765
HEALTH RELATED, N.E.C.	93	108	134	121	25	30	45	43
PSYCHOLOGY	376	444	472	381	46	54	50	73
SOCIAL SCIENCES	253	241	225	306	104	127	127	89
AGRICULTURAL ECONOMICS	14	21	17	14	4	10	18	17
ANTHROPOLOGY	48	49	38	50	9	8	14	4
ECONOMICS (EXCEPT AGRICULTURAL)	12	10	7	21	14	9	15	15
GEOGRAPHY	7	2	2	15	7	8	9	3
HISTORY AND PHILOSOPHY OF SCIENCE	5	6	7	13	7	5	4	6
LINGUISTICS	17	15	12	33	13	11	9	9
POLITICAL SCIENCE	14	14	43	44	17	30	23	10
SOCIOLOGY	97	70	68	79	17	22	16	19
SOCIOLOGY/ANTHROPOLOGY	0	0	1	3	0	2	0	0
SOCIAL SCIENCES, N.E.C.	39	54	30	34	16	22	19	6

SOURCE: U.S. Scientists & Engineers, 1986, National Science Foundation

TABLE 5-14

SCIENTISTS & ENGINEERS EMPLOYED AT 4-YEAR COLLEGES & UNIVERSITIES BY SEX & RACE/ETHNICITY, 1986

	Total	Women		White		Black		Asian		Indian		Hispanic#	
		No.	%Wom	No.	%W	No.	%W	No.	%A	No.	%I	No.	%H
Total	472,000	94,900	20.1	429,200	90.9	10,900	2.3	25,200	5.3	900	0.2	6,700	1.4
Scientists	386,700	89,500	23.1	354,200	91.6	9,500	2.5	18,200	4.7	900	0.2	5,000	1.3
Physical	61,200	6,700	10.9	56,700	92.6	900	1.5	3,200	5.2	*	0.0	800	1.3
Math	40,800	7,300	17.9	35,900	88.0	1,000	2.5	3,300	8.1	100	0.2	1,000	2.5
Computer	28,900	9,100	31.5	25,000	86.5	700	2.4	2,700	9.3	*	0.0	200	0.7
Environmental	16,200	2,200	13.6	15,200	93.8	*	0.0	800	4.9	*	0.0	400	2.5
Life	97,400	20,800	21.4	91,200	93.6	1,300	1.3	3,000	3.1	600	0.6	1,400	1.4
Psychological	45,400	14,900	32.8	42,300	93.2	2,100	4.6	400	0.9	100	0.2	400	0.9
Social	96,900	28,300	29.2	88,000	90.8	3,400	3.5	4,900	5.1	200	0.2	900	0.9
Engineers	85,300	5,500	6.4	75,000	87.9	1,400	1.6	7,000	8.2	*	0.0	1,700	2.0

* Too few to estimate. # Includes all racial groups.

SOURCE: 1986-87 Nationwide Survey of Secondary School Teachers of Physics, American Institute of Physics Pub. No. R-340

TABLE 5-15

CHARACTERISTICS OF PHYSICS TEACHERS, BY SEX, 1986-87

	MEN	WOMEN		MEN	WOMEN
All Teachers	77%	23%	Average Contribution to Household Income	74%	62%
Years of Teaching					
1-5	65	35			
6-10	66	34	Holds an Administrative Position	23	15
11-20	78	22			
21+	89	11			
Type of School			Geographic Region		
Public	78	22	South	64	36
Private	81	20	Rest of U.S.	83	18
Catholic	60	41			
Earned a Physics Degree	29	15	Has Physics-Related Work Experienced	28	13
Started Teaching in Area Other than Physics	67	83	Level of Physics Specialization		
			Specialist	40	22
			Career Teacher	32	28
			Draftee	28	50

SOURCE: Digest of Education Statistics, 1987 Edition, National Center for Statistics

TABLE 5-16

HISTORICAL SUMMARY OF U.S. FACULTY IN HIGHER EDUCATION BY SEX, 1869-70 - 1983-84

YEAR	Total Inst.	Total Faculty	Men	Women	%W
1869-1870	563	5,553	4,887	666	12.0
1879-1880	811	11,522	7,328	4,194	36.4
1889-1890	998	15,809	12,704	3,105	19.6
1899-1900	977	23,868	19,151	4,717	19.8
1909-1910	951	36,480	29,132	7,348	20.1
1919-1920	1,041	48,615	35,807	12,808	26.3
1929-1930	1,409	82,386	60,017	22,369	27.2
1939-1940	1,708	146,929	106,328	40,601	27.6
1949-1950	1,851	246,722	186,189	60,533	24.5
1959-1960	2,008	380,554	296,773	83,781	22.0
1969-1970	2,525	450,000	346,000	104,000	23.1
1979-1980	3,152	675,000	486,000	189,000	28.0
1981-1982	3,253	696,000	496,000	200,000	28.7
1983-1984	3,284	723,000	511,000	212,000	29.3

SOURCE: Fact Sheet on Women in Educational Administration compiled by Suzanne Howard, September 1980, Digest of Education Statistics, 1982, and Estimates of School Statistics Series, 1980-1987, National Education Association

TABLE 5-17

WOMEN AS PERCENT OF STAFF IN ELEMENTARY AND SECONDARY EDUCATION

YEAR	Teachers Elementary	Teachers Secondary	Principals Elementary	Principals Secondary
1928			55.0	
1948	93.0	60.0	41.0	
1965				10.0
1968	85.0	47.0		
1974	83.0		13.0	
1976	87.0	48.0		
1977				7.0
1978	83.0	46.0	18.0	
1979				
1980	83.0	48.0		
1981	83.1	48.9		
1983	83.4	49.4		
1984	83.5	49.7		
1985	83.5	50.1		
1986	84.0	51.4		
1987*	84.2	51.7		

* Estimated

SOURCE: National Science Teachers Association, Unpublished Data, 1985-86 Survey of Science and Math Teachers

TABLE 5-18

SCIENCE, MATH AND SOCIAL STUDIES TEACHERS BY GRADE RANGE AND SEX, 1985-86

(Percent)

	SCIENCE		MATH		SOCIAL STUDIES		TOTAL	
	7-8	9-12	7-8	9-12	7-8	9-12	7-8	9-12
Number in Sample	1,297	2,252	1,349	2,481	1,138	2,106	3,724	6,839
% Men	59.2	65.4	48.2	57.7	56.8	68.8	54.4	63.7
% Women	35.2	28.3	46.4	38.4	38.0	25.7	40.1	31.2
% Unknown	5.6	6.3	5.6	4.8	5.3	5.5	5.5	5.5

SOURCE: Status of the American Public School Teacher 1985-86, National Education Association, Copyright © 1987 by NEA, Used with Permission

TABLE 5-19

CHARACTERISTICS OF PUBLIC SCHOOL TEACHERS BY SEX, SELECTED YEARS, 1971-1986

	1971		1976		1981		1986	
	Men	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**
Sex (%)	34.3	65.7	32.9	67.0	33.1	66.9	31.2	68.8
Marital Status (%)								
Single	15.2	21.6	19.7	20.3	14.5	20.4	8.8	14.7
Married	81.5	66.9	76.3	68.8	80.7	69.3	83.4	72.3
Widowed/Divorced/Separated	3.2	11.4	4.0	10.9	4.8	10.4	7.8	13.0
Median Years of Experience	8	8	9	8	13	11	17	14
% in First Year of Teaching	9.8	8.8	6.5	5.1	1.4	3.0	2.3	3.4
% Earning Credits Past 3 Yrs	67.9	57.0	65.0	62.4	50.8	58.8	48.4	55.4
Average Credit Hrs Earned	17	13			10	9	4	4

TABLE 5-20

RACE OF TEACHERS AND PRINCIPALS IN PUBLIC SCHOOLS

	1971	1976	1981	1986
Teachers				
Black	8.1	8.0	7.8	6.9
White	88.3	90.8	91.6	89.6
Other	3.6	1.2	0.7	3.4
Principals				
Black	5.7	7.9	8.2	8.3
White	91.7	91.0	90.8	87.0
Other	2.7	1.1	0.9	3.8

TABLE 5-21

HIGHEST DEGREE AND TEACHING LEVEL BY SEX AND RACE, 1986

	TOTAL	MEN	WOMEN	WHITE	NON-WHITE
Highest Degree (%)					
Bachelor's	48.3	38.3	52.9	48.0	51.6
Master's	50.7	55.4	41.9	46.5	40.6
Ed Specialist (6 yrs)	4.6	5.0	4.3	4.6	4.7
Doctorate	0.7	1.0	0.6	0.5	2.3
Teaching Level (%)					
Elementary	46.5	20.4	58.4	46.4	47.3
Middle School	11.0	11.3	10.8	11.0	9.9
Junior High School	12.5	17.6	10.2	11.8	19.8
Senior High School	30.0	50.8	20.6	30.9	22.9

Source: Digest of Education Statistics 1988 (CS 88-600), National Center for Education Statistics

TABLE 5-22

CHARACTERISTICS OF PRIVATE SCHOOL TEACHERS: SPRING 1961 - 1986

Teacher characteristics	All private schools[1]	Level of school				Religious affiliation of school		
		Elementary	Secondary	Combined	Other	Catholic[2]	Other religiously affiliated[2]	Not religiously affiliated
1	2	3	4	5	6	7	8	9
Number of teachers, in thousands	**404**	**190**	**83**	**96**	**35**	**185**	**127**	**92**
Sex (percent)								
Total	100.0	100.0	100.0	100.0	100.0	—	—	—
Male	24.1	10.3	48.6	29.9	25.4	—	—	—
Female	75.9	89.7	51.5	70.1	74.6	—	—	—
Status (percent)								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Full-time teachers	77.9	77.1	82.9	76.7	74.3	83.2	71.7	75.9
Other teachers	22.2	22.9	17.1	23.3	25.7	16.8	28.3	24.1
Highest degree (percent)								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No degree	3.5	3.5	0.9	5.5	4.3	1.6	6.5	3.2
Associate	1.7	2.2	0.2	2.1	1.7	1.3	2.3	1.7
Bachelor's	64.0	74.1	48.5	58.0	62.5	66.7	63.6	59.3
Master's	29.4	19.8	48.6	32.0	29.9	29.5	26.4	33.6
Doctor's	1.3	0.5	2.0	2.5	1.6	0.9	1.3	2.3
Age (percent)								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 30 years	24.0	25.2	18.0	22.3	36.3	21.9	27.2	23.7
30 to 39 years	37.6	36.2	39.2	38.1	40.4	36.7	37.8	39.2
40 to 49 years	23.2	23.2	25.0	25.5	13.0	23.6	21.8	24.6
50 to 59 years	10.5	10.3	12.3	10.5	7.9	11.8	9.6	9.5
60 years or older	4.6	5.1	5.6	3.6	2.4	6.0	3.6	3.1
Race/ethnicity (percent)								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White	92.2	91.1	96.0	92.6	91.1	93.5	91.9	90.2
Black	3.8	4.8	1.4	3.3	5.0	2.5	4.0	5.9
Hispanic	2.9	2.9	2.9	3.3	2.4	3.4	2.9	2.2
Other	1.1	1.3	0.7	0.8	1.5	0.7	1.1	1.8
Years of teaching experience (percent)								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 years	24.8	25.2	18.6	23.7	40.6	20.8	27.5	29.4
5 to 9 years	27.0	27.7	22.6	29.2	27.5	24.5	30.7	26.8
10 years or more	48.2	47.1	58.8	47.1	31.9	54.8	41.8	43.8
Average salary[3]								
Base salary	$14,400	$12,900	$17,100	$14,900	$14,900	$13,900	$13,600	$16,500
Earned income[4]	15,600	13,700	19,000	16,500	16,600	15,100	14,800	18,000

[1] Tabulation includes full-time and part-time teachers.

[2] Includes schools with a religious orientation or religious affiliation.

[3] Average salary of full-time teachers only.

[4] Includes base salary, additional compensation for additional duties, summer school salary, and nonschool-related income.

—Data not available.

NOTE.—Data are based on a sample survey and may not be strictly comparable with data reported elsewhere. Elementary schools have no grade higher than 8. Secondary schools have no grade lower than 7. Combined schools have any other grade spans. Other schools includes special education, alternative, and vocational schools. Includes only schools which offer first grade or above. Data on other tables reflect full-time-equivalent teachers. Because of rounding, details may not add to totals.

SOURCE: 1980 Fact Book for Academic Administrators, American Council on Education and Digest of Education - Statistics, 1981, National Center for Education Statistics and Profile of Women's College Presidents, Women's College Coalition; and American Council on Education, Office of Women in Higher Education, December 1984 and September 1985, and personal communication, November 1989.

TABLE 5-23

WOMEN COLLEGE PRESIDENTS BY TYPE AND CONTROL OF INSTITUTION, 1975-1987

YEAR AND TYPE OF INSTITUTION		All Institutions Headed by Women		Public Institutions Headed by Women		Private Institutions Headed by Women		Women's Colleges* Headed by Women		Members of Religious Orders
		No.	%†	No.	%†	No.	%†	No.	%†	No.
1975	Total	148	4.8	16	1.1	132	8.2	na	na	105
	Four-Year	103	5.4	5	0.9	98	7.2	na	na	79
	Two-Year	45	3.9	11	1.2	34	14.2	na	na	26
1976	Total	154	5.0	16	1.1	138	8.6	71	56.8	
	Four-Year	110	5.7	3	0.5	107	7.8	57	58.8	
	Two-Year	44	3.8	13	1.4	31	13.0	14	50.0	
1977	Total	156	5.0	19	1.3	137	8.3	87	71.3	
	Four-Year	112	5.7	5	0.9	107	7.7	72	75.0	
	Two-Year	44	3.7	14	1.5	30	12.0	15	57.7	
1978	Total	177	5.6	31	2.1	146	8.7	75	64.1	
	Four-Year	123	6.3	9	1.6	114	8.1	62	66.7	
	Two-Year	54	4.5	22	2.4	32	11.3	13	54.2	
1980	Total	219	6.9	62	4.2	157	9.4	78	67.8	
	Four-Year	145	7.4	21	3.8	124	8.8	60	67.4	
	Two-Year	64	5.4	41	4.4	33	12.3	18	18.3	
1981	Total	231	7.2	72	4.8	159	9.2	80	70.2	98
	Four-Year	162	8.3	25	4.5	135	9.5	61	68.5	86
	Two-Year	69	5.4	47	4.9	24	7.1	19	19.4	12
1982	Total	244	7.5	78	5.2	166	9.5	84	73.7	99
	Four-Year	152	8.1	25	4.5	127	8.9	62	69.7	73
	Two-Year	92	7.2	53	5.6	39	11.6	22	22.4	26
1983	Total	254	7.8	85	5.7	169	9.6	85	74.6	97
	Four-Year	152	7.7	28	5.0	124	8.7			
	Two-Year	102	8.0	57	6.1	45	13.4			
1984	Total	286	8.8	104	6.9	182	10.4	83	74.8	95
	Four-Year	166	8.4	32	5.7	134	9.4			
	Two-Year	120	9.4	72	7.7	48	14.4			
1987	Total	296	8.7	112	7.5	184	10.1			86
	Four-Year	195	9.4	39	2.6	156	8.5			
	Two-Year	101	7.6	73	4.8	28	1.5			

Blanks indicate that the information was not available in source.

* Institutions with enrollment of at least 90 percent women.

† Institutions headed by women as a percentage of all institutions of the type indicated. Annual directories published by NCES are the source of data concerning the "universe" of institutions by type and control.

Note: In 1987, 40 minority women headed institutions of higher education, including 22 who were black, 13 Hispanic, 4 American Indian and one Asian.

SOURCE: Series of Earned Degrees Conferred, National Center for Education Statistics

TABLE 6-1

PhD DEGREES IN THE PHYSICAL SCIENCES BY SEX AND SUBFIELD

				Physical Sciences Fields															
				Physics				Chemistry				Geology				Other			
Year	Total	Wom	%W	No.	%T	Wom	%W	No.	%T	Wom	%W	No.	%T	Wom	%W	No.	%T	Wom	%W
1950	1498	49	3	358	24	5	1	953	64	39	4	113	8	3	3	74	5	2	3
1951	1681	64	4	443	26	8	2	1046	62	52	5	123	7	3	2	69	4	1	1
1952	1720	57	3	485	28	9	2	1031	60	45	4	116	7	0	0	88	5	3	3
1953	1714	62	4	478	28	6	1	999	58	51	5	133	8	3	2	104	6	2	2
1954	1686	61	4	485	29	6	1	1013	60	45	4	136	8	6	4	52	3	4	8
1955	1713	52	3	511	30	12	2	1005	59	36	4	154	9	2	1	43	3	2	5
1956	1667	68	4	470	28	8	2	986	59	52	5	135	8	1	1	76	5	7	9
1957	1674	71	4	453	27	14	3	1003	60	48	5	141	8	3	2	77	5	6	8
1958	1655	66	4	464	28	9	2	939	57	49	5	151	9	3	2	101	6	5	5
1959	1812	69	4	482	27	9	2	1009	56	49	5	198	11	5	3	123	7	6	5
50-59	16,820	619	4	4,629	28	86	2	9,984	59	466	5	1,400	8	29	2	807	5	38	5
1960	1838	62	3	487	26	10	2	1048	57	48	5	201	11	4	2	102	6	0	0
1961	1991	70	4	564	28	6	1	1131	57	57	5	202	10	3	1	94	5	4	4
1962	2122	87	4	667	31	12	2	1139	54	69	6	199	9	3	2	117	6	3	3
1963	2380	95	4	752	32	10	1	1254	53	78	6	265	11	5	2	109	5	2	2
1964	2455	113	5	778	32	11	1	1301	53	93	7	237	10	5	2	139	6	4	3
1965	2829	127	4	942	33	20	2	1414	50	101	7	274	10	1	0	199	7	5	3
1966	3045	131	4	973	32	21	2	1571	52	94	6	290	10	10	3	211	7	6	3
1967	3462	162	5	1183	34	30	3	1744	50	118	7	285	8	5	2	250	7	9	4
1968	3593	188	5	1260	35	26	2	1757	49	142	8	280	8	6	2	296	8	14	5
1969	3859	206	5	1296	34	32	2	1941	50	145	7	314	8	18	6	308	8	11	4
60-69	27,574	1,241	5	8,902	32	178	2	14,300	52	945	7	2,547	9	60	2	1825	7	58	3
1970	4313	236	5	1439	33	37	3	2208	51	169	8	283	7	9	3	383	9	21	5
1971	4391	246	6	1482	34	43	3	2160	49	173	8	324	7	11	3	425	10	19	4
1972	4103	273	7	1344	33	43	3	1971	48	193	10	310	8	16	5	478	12	21	4
1973	4016	274	7	1338	33	51	4	1882	47	184	10	305	8	12	4	491	12	27	5
1974	3631	253	7	1115	31	47	4	1828	50	173	9	315	9	10	3	373	10	23	6
1975	3628	302	8	1080	30	52	5	1824	50	205	11	292	8	13	4	432	12	32	7
1976	3433	300	9	997	29	45	5	1623	47	197	12	313	9	23	7	500	15	35	7
1977	3344	320	10	945	28	55	6	1571	47	188	12	325	10	23	7	503	15	54	11
1978	3137	312	10	873	28	49	6	1525	49	203	13	268	9	26	10	471	15	34	7
1979	3104	350	11	918	30	66	7	1518	49	230	15	286	9	27	9	382	12	27	7
70-79	37,100	2,866	8	11,531	31	488	4	18,110	49	1,915	11	3,021	8	170	6	4438	12	293	7
1980	3095	386	12	830	27	63	8	1551	50	260	17	313	10	26	8	401	13	37	9
1981	3141	376	12	866	28	61	7	1622	52	251	15	284	9	30	11	369	12	34	9
1982	3286	451	14	873	27	66	8	1722	52	281	16	282	9	50	18	409	12	54	13
1983	3269	458	14	858	26	61	7	1746	53	295	17	293	9	48	16	372	11	54	15
1984	3298	489	15	953	29	76	8	1744	53	319	18	315	10	49	16	286	9	45	16
1985	3390	552	16	951	28	84	9	1789	53	351	20	289	9	55	19	361	11	62	17
1986	3551	588	17	1010	28	91	9	1908	54	400	21	215	6	56	26	418	12	41	10
1987	3671	634	17	1086	30	103	9	1976	54	421	21	280	8	57	20	329	9	53	16
80-86	26,701	3,934	15	7,427	28	605	8	14,058	53	2,578	18	2,271	9	371	16	2.945	11	380	13
TOTAL	108,195	8,660	8	32,489	30	1,357	4	56,452	52	5,904	10	9,239	9	630	7	10,015	9	769	8

SOURCE: Series of Earned Degrees Conferred, National Center for Education Statistics

TABLE 6-1 (continued)

MASTER'S DEGREES IN THE PHYSICAL SCIENCES BY SEX AND SUBFIELD

				Physical Sciences Fields															
				Physics				Chemistry				Geology				Other			
Year	Total Phys Sci	Women	%W	No.	%PS	Wom	%W	No.	%PS	Wom	%W	No.	%PS	Wom	%W	No.	%PS	Wom	%W
1950	3184	265	8	922	29	34	4	1576	49	208	13	493	15	16	3	193	6	7	4
1951	3200	226	7	973	30	39	4	1462	46	162	11	565	18	22	4	200	6	3	2
1952	3054	224	7	886	29	35	4	1409	46	167	12	486	16	17	3	273	9	5	2
1953	2711	164	6	721	27	35	5	1211	45	116	10	517	19	8	2	262	10	5	2
1954	2374	177	7	714	30	29	4	1098	46	126	11	412	17	15	4	150	6	7	5
1955	2544	207	8	729	29	28	4	1173	46	137	12	507	20	26	5	135	5	16	12
1956	2655	220	8	742	28	23	3	1164	44	129	11	508	19	14	3	241	9	54	22
1957	2704	221	8	825	31	28	3	1047	39	134	13	567	21	16	3	265	10	43	16
1958	3034	271	9	795	26	25	3	1125	37	167	15	718	24	21	3	396	13	58	15
1959	3179	270	8	915	29	30	3	1145	36	164	14	672	21	14	2	447	14	62	14
50-59	28,639	2,245	8	8,222	29	306	4	12,410	43	1,510	12	5,445	19	169	3	2,562	9	260	10
1960	3387	327	10	1073	32	35	3	1228	36	203	17	591	17	14	2	495	15	75	15
1961	3799	345	9	1271	33	50	4	1313	35	200	15	577	15	13	2	638	17	82	13
1962	3929	385	10	1425	36	62	4	1425	36	246	17	594	15	21	4	485	12	56	12
1963	4132	428	10	1567	38	76	5	1463	35	259	18	561	14	25	4	541	13	68	13
1964	4567	410	9	1848	40	66	4	1586	35	280	18	555	12	22	4	578	13	42	7
1965	4918	513	10	1906	39	80	4	1715	35	328	19	511	10	25	5	786	16	80	10
1966	4992	528	11	1949	39	80	4	1839	37	355	19	525	11	34	6	679	14	59	9
1967	5412	553	10	2111	39	96	5	1831	34	347	19	600	11	36	6	870	16	74	9
1968	5508	635	12	2088	38	95	5	2014	37	418	21	655	12	50	8	751	14	72	10
1969	5911	668	11	2259	38	120	5	2070	35	381	18	675	11	61	9	907	15	106	12
60-69	46,555	4,792	10	17,497	38	760	4	16,484	35	3,017	18	5,844	13	301	5	6,730	14	714	11
1970	5948	847	14	2205	37	158	7	2146	36	480	22	610	10	67	11	987	17	142	14
1971	6386	853	13	2194	34	152	7	2284	36	492	22	651	10	63	10	1257	20	146	12
1972	6307	888	14	2035	32	159	8	2259	36	505	22	841	13	90	11	1172	19	134	11
1973	6274	847	14	1755	28	113	6	2230	36	467	21	827	13	85	10	1462	23	182	12
1974	6087	887	15	1662	27	136	8	2138	35	474	22	938	15	99	11	1349	22	178	13
1975	5830	848	15	1577	27	124	8	2006	34	416	21	932	16	116	12	1315	23	192	15
1976	5485	825	15	1451	26	132	9	1796	33	383	21	1003	18	130	13	1235	23	180	15
1977	5345	887	17	1319	25	126	10	1775	33	448	25	1047	20	121	12	1204	23	192	16
1978	5576	946	17	1294	23	123	10	1882	34	445	24	1239	22	213	17	1161	21	165	14
1979	5464	992	18	1319	24	135	10	1765	32	447	25	1300	24	242	19	1080	20	168	16
70-79	58,702	8,820	15	16,811	29	1,358	8	20,281	35	4,557	22	9,388	16	1,226	13	12,222	21	1,679	14
1980	5233	975	19	1192	23	118	10	1733	33	447	26	1295	25	237	18	1013	19	173	17
1981	5284	1084	21	1294	24	115	9	1654	31	470	28	1396	26	320	23	940	18	179	19
1982	5514	1196	22	1284	23	156	12	1751	32	492	28	1540	28	344	22	939	17	204	22
1983	5277	1131	21	1351	26	158	12	1622	31	460	28	1552	29	353	23	752	14	160	21
1984	5550	1304	23	1332	28	192	13	1667	30	530	32	1514	27	365	24	837	15	217	26
1985	5782	1340	23	1523	26	190	12	1719	30	557	32	1682	29	409	24	858	15	184	21
1986	5896	1429	24	1501	25	224	15	1754	30	595	34	1767	30	407	23	874	15	203	23
1987	5649	1408	25	1563	28	243	16	1738	31	564	32	1386	25	357	26	962	17	244	25
80-86	44,185	9,867	22	11,240	25	1,396	12	13,638	31	4,115	30	12,132	27	2,792	23	7,175	16	1,564	22
TOTAL	178,081	25,724	14	53,770	30	3,820	7	62,813	35	13,199	21	32,809	18	4,488	14	28,689	16	4,217	15

SOURCE: Series of Earned Degrees Conferred, National Center for Education Statistics

TABLE 6-1 (continued)

BACHELOR'S DEGREES IN THE PHYSICAL SCIENCES BY SEX AND SUBFIELD

				Physical Sciences Fields															
				Physics				Chemistry				Geology				Other			
Year	Total Phys Sci	Women	%W	No.	%P/S	Wom	%W	No.	%P/S	Wom	%W	No.	%P/S	Wom	%W	No.	%P/S	Wom	%W
1950	17725	1737	10	3414	19	127	4	10619	60	1485	14	3043	17	109	4	649	4	16	2
1951	14296	1420	10	2788	20	117	4	9258	58	1222	15	2717	19	74	3	533	4	7	1
1952	12145	1332	11	2247	19	106	5	6819	56	1102	16	2102	17	76	4	977	8	48	5
1953	10414	1277	12	2005	19	84	4	5943	57	1073	18	1719	17	68	4	747	7	52	7
1954	9880	1273	13	1952	20	75	4	5791	59	1064	18	1632	17	79	5	505	5	55	11
1955	10516	1382	13	1996	19	76	4	5920	56	1139	19	1795	17	92	5	805	8	75	9
1956	11672	1501	13	2335	20	102	4	6178	53	1182	19	2163	19	78	4	996	9	139	14
1957	12934	1613	12	2745	21	122	4	6591	51	1294	20	2570	20	89	3	1028	8	108	11
1958	14352	1669	12	3186	22	144	5	7010	49	1305	19	2827	20	104	4	1329	9	116	9
1959	15460	1766	11	3809	25	141	4	7308	47	1411	19	2878	19	91	3	1465	9	123	8
50-59	129,394	14,970	12	26,477	20	1,094	4	70,437	54	12,277	17	23,446	18	860	4	9,034	7	739	8
1960	16057	2016	13	4338	27	172	4	7603	47	1598	21	2465	15	75	3	1651	10	171	10
1961	15500	2008	13	4322	28	230	5	7604	49	1508	20	1870	12	77	4	1704	11	193	11
1962	15894	2146	14	4812	30	188	4	8089	51	1715	21	1430	9	69	5	1563	10	174	11
1963	16276	2238	14	4785	29	237	5	8823	54	1768	20	1087	7	64	6	1581	10	169	11
1964	17527	2450	14	4956	28	241	5	9724	55	1914	20	1113	6	94	8	1734	10	201	12
1965	17916	2532	14	4954	28	246	5	10047	56	1936	19	1131	6	119	11	1784	10	231	13
1966	17186	2333	14	4609	27	224	5	9735	57	1801	19	1329	8	127	10	1513	9	181	12
1967	17794	2402	13	4733	27	267	6	9872	55	1771	18	1458	8	163	11	1731	10	201	12
1968	19442	2674	14	5045	26	296	6	10847	56	1965	18	1718	9	178	10	1832	9	235	13
1969	21591	2952	14	5535	26	322	6	11807	55	2156	18	2014	9	205	10	2235	10	269	12
60-69	175,183	23,751	14	48,089	27	2,423	5	94,151	54	18,132	19	15,615	9	1,171	7	17,328	10	2,025	12
1970	21551	2969	14	5333	25	329	6	11617	54	2116	18	2286	11	246	11	2315	11	278	12
1971	21549	3014	14	5076	24	343	7	11183	52	2095	19	2415	11	265	11	2875	13	311	11
1972	20887	3148	15	4645	22	323	7	10721	51	2120	20	2573	12	326	13	2948	14	379	13
1973	20809	3121	15	4268	21	313	7	10226	49	1967	19	2929	14	389	13	3386	16	452	13
1974	21287	3536	17	3962	19	337	9	10525	49	2112	20	3256	15	533	16	3544	17	554	16
1975	20896	3838	18	3716	18	362	10	10649	51	2385	22	3324	16	575	17	3207	15	516	16
1976	21559	4139	19	3544	16	388	11	11107	52	2497	22	3362	16	606	18	3546	16	648	18
1977	22618	4551	20	3420	15	358	10	11322	50	2602	23	3879	17	836	22	3997	18	755	19
1978	23175	4987	22	3330	14	369	11	11474	50	2881	25	4344	19	958	22	4027	17	779	19
1979	23363	5287	23	3338	14	399	12	11643	50	3113	27	4503	19	1058	23	3879	17	717	18
70-79	217,694	38,590	18	40,632	19	3,521	9	110,467	51	23,888	22	32,871	15	5,792	18	33,724	15	5,389	16
1980	23661	5651	24	3397	14	434	13	11446	48	3277	29	4600	19	1131	25	4218	18	809	19
1981	23952	5888	25	3441	14	432	13	11347	47	3394	30	5202	22	1303	25	3962	17	759	19
1982	24052	6186	26	3472	14	460	13	11062	46	3491	32	5538	23	1415	26	3980	17	820	21
1983	23234	6350	27	3793	16	482	13	10796	46	3630	34	6102	26	1568	26	2543	11	670	26
1984	23525	6487	28	3907	17	557	14	10704	46	3731	35	6549	28	1615	25	2365	10	584	25
1985	23597	6586	28	4097	17	559	14	10482	44	3791	36	6308	27	1558	25	2710	11	678	25
1986	21620	5927	27	4180	19	611	15	10116	47	3633	36	4974	23	1103	22	2350	11	580	25
1987	19885	5632	28	4330	22	695	16	9661	49	3591	37	3367	17	776	23	2527	13	570	23
80-86	183,526	48,707	27	30,617	17	4,230	14	85,614	47	28,538	33	42,640	23	10,469	25	24,655	13	5,470	22
TOTAL	705,797	126,018	18	145,815	21	11,268	8	360,669	51	82,835	23	114,572	16	18,292	16	84,741	12	13,623	16

FIELD: Physical Sciences

SOURCE: Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, National Science Foundation, September 1981; and 1980-1988 Summary Report, Doctorate Recipients from United States Universities, National Research Council, 1981-1988

TABLE 6-2

NUMBER OF Ph.D. RECIPIENTS IN THE PHYSICAL SCIENCES* BY TYPE OF CITIZENSHIP, 1960-1988

YEAR	TOTAL	U.S.	FOREIGN			Citizenship Not Known
			TOTAL	Immigrants	Non-Immigrants	
1960	1,861	1,619	229	51	178	13
1961	1,993	1,696	269	48	221	28
1962	2,097	1,812	262	32	230	23
1963	2,428	2,045	333	55	278	50
1964	2,527	2,130	343	74	269	54
1965	2,865	2,418	411	85	326	36
1966	3,059	2,526	446	88	358	87
1967	3,504	2,891	540	124	416	73
1968	3,671	3,073	527	130	397	71
1969	3,919	3,251	581	170	411	87
1970	4,404	3,631	709	275	434	64
1971	4,501	3,689	737	330	407	75
1972	4,233	3,348	819	373	446	66
1973	4,021	3,098	856	348	508	67
1974	3,709	2,743	809	302	507	157
1975	3,631	2,734	813	269	544	84
1976	3,442	2,619	765	247	518	58
1977	3,410	2,623	720	213	507	67
1978	3,234	2,494	670	206	464	70
1979	3,321	2,570	685	199	486	66
1980	3,151	2,393	682	176	506	76
1981	3,208	2,419	683	160	523	106
1982	3,348	2,511	733	146	587	104
1983	3,438	2,544	794	149	645	100
1984	3,459	2,546	913	142	671	100
1985	3,531	2,549	902	166	736	80
1986	3,679	2,574	1,020	158	862	85
1987	3,837	2,498	1,093	173	920	246
1988	4,045	2,601	1,166	167	999	279

*Physics, Astronomy, Chemistry, and Earth, Atmospheric and Marine Sciences

SOURCE: Office of Personnel Management, unpublished tabulations

TABLE 6-3

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN THE PHYSICAL SCIENCES BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, SEPT 30, 1988

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		ASIAN		AM. INDIAN		WHITE	
	TOTAL	WOMEN	% W	TOTAL	%	WOMEN	% W	No.	% B	No.	% H	No.	% A	No.	% I	No.	% W
General Physical Science	5898	912	15.5	462	7.8	114	24.7	223	3.8	85	1.4	142	2.4	12	0.2	5436	92.2
Health Physics	610	97	15.9	78	12.8	18	23.1	36	5.9	11	1.8	29	4.8	2	0.3	532	87.2
Physics	4038	230	5.7	287	7.1	35	12.2	59	1.5	45	1.1	179	4.4	4	0.1	3751	92.9
Geophysics	656	65	9.9	42	6.4	4	9.5	9	1.4	9	1.4	22	3.4	2	0.3	614	93.6
Hydrology	2511	320	12.7	132	5.3	28	21.2	21	0.8	56	2.2	46	1.8	9	0.4	2379	94.7
Chemistry	7899	1879	23.8	1448	18.3	462	31.9	494	6.3	172	2.2	770	9.7	12	0.2	6451	81.7
Metallurgy	318	12	3.8	43	13.5	1	2.3	3	0.9	7	2.2	32	10.1	1	0.3	275	86.5
Astronomy & Space Science	502	33	6.6	24	4.8	3	12.5	6	1.2	6	1.2	9	1.8	3	0.6	478	95.2
Meteorology	2320	150	6.5	193	8.3	31	16.1	64	2.8	49	2.1	77	3.3	3	0.1	2127	91.7
Geology	2879	502	17.4	117	4.1	22	18.8	22	0.8	37	1.3	40	1.4	18	0.6	2762	95.9
Oceanography	773	106	13.7	58	7.5	12	20.7	26	3.4	8	1.0	21	2.7	3	0.4	715	92.5
Cartography	4586	868	18.9	548	11.9	148	27.0	363	7.9	128	2.8	42	0.9	15	0.3	4038	88.1
Geodesy	344	48	14.0	31	9.0	10	32.3	20	5.8	5	1.5	6	1.7	0	0.0	313	91.0
Land Surveying	524	19	3.6	28	5.3	2	7.1	1	0.2	13	2.5	2	0.4	12	2.3	496	94.7
Forest Products Technology	74	4	5.4	4	5.4	0	0.0	0	0.0	0	0.0	4	5.4	0	0.0	70	94.6
Food Techonolgy	303	91	30.0	51	16.8	15	29.4	23	7.6	6	2.0	22	7.3	0	0.0	252	83.2
Textile Technology	97	44	45.4	7	7.2	3	42.9	4	4.1	0	0.0	3	3.1	0	0.0	90	92.8
Photographic Technology	44	2	4.5	5	11.4	1	20.0	2	4.5	3	6.8	0	0.0	0	0.0	39	88.6
TOTALS	34376	5382	15.7	3558	10.4	909	25.5	1376	4.0	640	1.9	1446	4.2	96	0.3	30818	89.6

FIELD: Biochemistry

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1986-87, U.S. Office of Education (NCES)

TABLE 6-4

BIOCHEMISTRY DEGREES AWARDED BY SEX AND LEVEL OF DEGEE, 1947-48 - 1986-87

YEAR	BACHELOR'S Total	BACHELOR'S Women	BACHELOR'S % Women	MASTER'S Total	MASTER'S Women	MASTER'S % Women
1947-48 thru 1959-60	1,965	284	14.4	1,748	394	22.1
1960-61 thru 1969-70	2,509	673	26.8	2,235	685	30.6
1970-71	568	138	24.3	251	99	39.4
1971-72	699	175	25.0	252	90	35.7
1972-73	872	195	22.4	270	74	27.4
1973-74	1,101	254	23.1	249	65	26.1
1974-75	1,355	359	26.5	270	77	28.5
1975-76	1,622	480	29.6	254	72	28.3
1976-77	1,693	495	29.2	314	104	34.2
1977-78	1,752	517	29.5	319	105	32.9
1978-79	1,799	591	32.9	301	131	43.5
1979-80	1,686	596	35.4	268	98	36.6
1980-81	1,837	656	35.7	258	90	34.9
1981-82	1,865	668	35.8	273	104	38.1
1982-83*	1,876	716	38.2	270	105	38.9
1983-84	2,052	843	41.1	254	109	42.9
1984-85	2,111	850	40.3	257	115	44.7
1985-86	2,109	867	41.1	279	114	40.9
1986-87	2,111	917	43.4	265	114	43.0
TOTAL	31,492	10,274	32.6	8,587	2,745	32.0

*Includes Biophysics, beginning in 1982-83

SOURCE: Doctorate Records File of the National Research Council

TABLE 6-5

BIOCHEMISTRY PhD DEGREES BY SEX, 1920 - 1988

Year	Total Both Sexes	Women Only	% Women
1920-59	3,544	484	13.7
1960-69	4,241	713	16.8
1970-72	1,815	322	17.7
1973	636	129	20.3
1974	606	147	24.3
1975	620	147	23.7
1976	616	141	22.9
1977	608	135	22.2
1978	607	146	24.1
1979	600	156	26.0
70-79	6,108	1,323	21.7
1980	672	188	28.0
1981	644	189	29.3
1982	650	166	25.5
1983	656	194	29.6
1984	606	191	31.5
1985	579	184	31.8
1986	571	194	34.0
1987	571	198	34.7
1988	613	203	33.1
80-88	5,562	1,707	30.7
TOTAL	19,455	4,227	21.7

SOURCE: Series of Earned Degrees Conferred, National Center for Education Statistics

TABLE 6-6

PhD AWARDS IN CHEMISTRY BY SUBFIELD AND SEX, 1960 - 1988

	Year of Doctorate														
	1960-69			1970-79			1980-86			1987			1987		
Subfields	Total	Women	%Wom	Total	Women	%Wom	Total	Women	%Wom	Total	Women	%Wom	Total	Women	%Wom
CHEMISTRY Total	14586	933	6.4	18201	1893	10.4	13929	2501	18.0	1974	406	20.6	2018	429	21.3
Agricultural & Food(1)	428	24	5.6	211	35	16.6									
Analytical	1043	69	6.6	1609	127	7.9	1923	328	17.1	314	72	22.9	301	60	19.9
Inorganic	1575	128	8.1	2401	298	12.4	1813	353	19.5	240	59	24.6	250	66	26.4
Nuclear	272	13	4.8	244	22	9.0	109	14	12.8	13			7		
Organic	5986	333	5.6	6131	504	8.2	4021	610	15.2	510	88	17.3	529	89	16.8
Pharmaceutical	470	18	3.8	552	63	11.4	471	109	23.1	64	16	25.0	73	19	26.0
Physical	3980	270	6.8	4101	483	11.8	2422	491	20.3	302	59	19.5	317	71	22.4
Polymer				310	18	5.8	538	79	14.7	96	13	13.5	81	12	14.8
Theoretical	294	24	8.2	528	67	12.7	334	51	15.3	46	17	37.0	50	9	18.0
Chemistry, General	305	31	10.2	1405	183	13.0	1603	286	17.8	299	54	18.1	316	75	23.7
Chemistry, Other	233	23	9.9	709	93	13.1	695	180	25.9	90	28	31.1	94	28	29.8

(1) Deleted in 1980

SOURCE: Early Release of Summary Statistics on Science and Engineering Doctorates, 1988, National Science Foundation

TABLE 6-7

CHEMISTRY DOCTORATES BY CITIZENSHIP AND VISA TYPE, SEX AND RACIAL/ETHNIC GROUP, 1978-88

		Foreign Citizens				U.S. Citizens										
				Visas					Minorities				Total	%		Un-
Year	Total	Total	%For	Temp	Perm	TOTAL	MEN	WOMEN	Black	Hisp	Asian	Ind	Min	Min	White	known
1978	1509	335	22.2	216	119	1174	1025	149	27	13	33	3	76	6.5	1013	85
1979	1543	303	19.6	208	95	1240	1070	170	28	13	32	1	74	6.0	1078	88
1980	1506	337	22.4	237	100	1169	984	185	10	11	40	3	64	5.5	1023	82
1981	1568	333	21.2	239	94	1235	1056	179	13	20	26	1	60	4.9	1102	73
1982	1633	348	21.3	264	84	1285	1076	209	10	15	35		60	4.7	1191	34
1983	1707	352	20.6	283	69	1355	1121	234	11	19	39	3	72	5.3	1248	35
1984	1713	381	22.2	298	83	1332	1083	249	18	26	50	3	97	7.3	1189	46
1985	1762	417	23.7	330	87	1345	1084	261	19	14	57	2	92	6.6	1219	34
1986	1806	486	26.9	393	93	1320	1044	276	13	24	56	5	98	7.4	1182	40
1987	1871	490	26.2	399	91	1381	1085	296	11	40	49	6	106	7.7	1243	32
1988	1889	516	27.3	441	75	1373	1067	306	17	43	47	5	112	8.2	1231	30

FIELD: Chemistry

SOURCE: Doctorate Records File and Summary Reports: Doctorate Recipients from United States Universities, 1974 - 1988, National Research Council

TABLE 6-8

CHEMISTRY PhD AWARDS BY CITIZENSHIP AND VISA TYPE, 1967 - 1988

		U.S.		FOREIGN						
				Total		Immigrant		Non-Immigrant		Citizenship Unknown
YEAR	TOTAL	No.	%	No.	%	No.	%	No.	%	
1967	1,773	1,470	82.9	268	15.1	2	0.1	301	17.0	32
1978	1,782	1,515	85.0	230	12.9				0.0	36
1969	1,967	1,656	84.2	279	14.2	29	1.5	282	14.3	30
1970	2,223	1,863	83.8	338	15.2				0.0	20
1971	2,211	1,842	83.3	347	15.7	46	2.1	323	14.6	22
1972	2,011	1,605	79.8	370	18.4				0.0	36
1973	1,855	1,458	78.6	365	19.7	116	6.3	281	15.1	32
1874	1,792	1,407	78.5	355	19.8					30
1975	1,776	1,394	78.5	345	19.4	60	3.4	322	18.1	37
1976	1,623	1,259	77.6	339	20.9					24
1977	1,571	1,238	78.8	305	19.4	104	6.6	199	12.7	28
1978	1,545	1,173	75.9	335	21.7	120	7.8	215	13.9	37
1979	1,335	1,056	79.1	258	19.3	279	20.9	208	15.6	20
1980	1,538	1,164	75.7	335	21.8	100	6.5	237	15.4	37
1981	1,611	1,232	76.5	330	20.5	94	5.8	238	14.8	47
1982	1,678	1,279	76.2	347	20.7	83	4.9	264	15.7	52
1983	1,759	1,354	77.0	352	20.0	70	4.0	283	16.1	53
1984	1,765	1,333	75.5	379	21.5	81	4.6	298	16.9	53
1985	1,836	1,344	73.2	417	22.7	87	4.7	330	18.0	84
1986	1,903	1,319	69.3	487	25.6	93	4.9	393	20.7	97
1987	1,974	1,376	69.7	490	24.8	91	4.6	399	20.2	109
1988	2,018	1,373	69.7	522	24.8	75	3.7	441	21.9	129
TOTAL	39,546	30,710	77.7	7,793	19.7	1,530	3.9	5,014	12.7	1,045

FIELD: Chemistry

SOURCE: American Chemical Society, Committee on Professional Training

TABLE 6-9

CHEMISTRY GRADUATES BY DEGREE LEVEL AND SEX, 1971-1988

YEAR	B.S. (ACS Certified)			B.S. (Not Certified)			M.S.			Ph.D.		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
1971	3,708	592	16.0	4,248	744	17.5	1,941	443	22.8	2,097	117	8.4
1972	3,424	587	17.1	4,484	819	18.3	2,019	470	23.3	1,929	207	10.7
1973	3,835	687	17.9	4,225	7545	17.9	2,005	439	21.9	1,880	182	9.7
1974	3,844	758	19.7	4,868	948	19.5	1,867	430	23.0	1,732	181	10.4
1975	3,897	794	20.4	5,187	1,110	21.4	1,814	401	22.1	1,781	208	11.7
1976	4,103	855	20.8	5,813	1,332	22.9	1,676	373	22.3	1,622	202	12.5
1977	4,219	949	22.3	5,988	1,355	22.6	1,688	403	23.9	1,563	189	12.1
1978	4,260	995	23.4	6,090	1,540	25.3	1,798	434	24.1	1,532	214	14.0
1979	4,424	1,107	25.0	6,027	1,691	28.1	1,716	448	26.1	1,532	243	15.9
1980	4,170	1,152	27.6	6,000	1,658	27.6	1,698	419	24.7	1,561	274	17.6
1981	4,337	1,223	28.2	6,116	1,805	29.5	1,609	451	28.0	1,613	255	15.8
1982	4,179	1,284	30.7	5,687	1,721	30.3	1,645	491	29.8	1,683	272	16.2
1983	4,233	1,391	32.9	5,810	1,921	33.1	1,569	444	28.3	1,759	300	17.1
1984	4,201	1,420	33.8	5,618	1,952	34.7	1,637	544	33.2	1,777	331	18.6
1985	4,021	1,417	35.2	5,658	1,999	35.3	1,621	524	32.3	1,806	359	19.9
1986	3,892	1,380	35.5	5,403	1,967	36.4	1,620	564	34.8	1,885	389	20.6
1987	3,663	1,303	35.6	5,175	1,954	37.8	1,636	552	33.7	1,936	414	21.4
1988	3,453	1,337	38.7	4,919	1,958	39.8	1,584	530	33.5	1,955	451	23.1

SOURCE: Women Chemists Committee of the American Chemical Society

TABLE 6-10

DOCTORAL TENURE TRACK CHEMISTRY FACULTIES BY RANK, SEX AND YEAR

YEAR	Total Faculty	Women No.	Women %	Women Professor	Women Assoc Prof	Women Asst Prof
1970-71	4,091	61	1.5	15	23	23
1976-77	4,125	110	2.7	27	28	55
1982-83	4,455	185	4.2	46	49	90
1984-85	4,327	189	4.4	54	59	75
1986-87	4,453	217	4.9	66	73	78

TABLE 6-11

BS/MS CHEMISTRY FACULTIES BY RANK, SEX AND YEAR

YEAR	Total Faculty	Women No.	Women %	Women Professor	Women Assoc Prof	Women Asst Prof
1965	2,546	305	12.0	86	87	132
1977	4,915	504	10.3	144	169	188
1980	4,706	499	10.6	156	140	201
1983	4,944	546	11.0	177	158	211
1986	4,740	530	11.2	166	151	213

TABLE 6-12

BS/MS CHEMISTRY FACULTIES BY SEX AND RANK IN 1986

Rank	Total	Men	Women	% Women	% of Men	% of Women
Professor	2,510	2,344	166	6.6	54.4	26.7
Associate Professor	1,245	1,094	151	12.1	25.4	24.3
Assistant Professor	986	773	213	21.6	17.9	34.3
Instructor	191	100	91	47.6	2.3	14.7

TABLE 6-13

BS/MS INSTITUTIONS WITH NO WOMEN CHEMISTRY FACULTY

	1977	1980	1983	1986
Institutions Surveyed	897	838	865	824
No With no Women	567	499	514	456
% With no Women	63.2	59.5	59.4	55.3

FIELD: **Chemistry**

SOURCE: 1976 and 1978 Report of Chemists' Salaries and Employment Status and Salaries 1981, 1983, 1987 and 1989, Office of Manpower Studies, American Chemical Society

TABLE 6-14

DISTRIBUTION OF ACS MEMBER CHEMISTS IN INDUSTRY, BY AGE, HIGHEST DEGREE AND SEX, 1989

AGE LEVEL	BACHELOR'S		MASTER'S		DOCTOR'S	
	% Men	% Women	% Men	% Women	% Men	% Women
20 - 29	18.2	41.8	6.6	19.8	3.9	9.0
30 - 39	32.6	34.4	31.3	35.9	28.5	46.6
40 - 49	17.0	13.6	25.6	24.0	32.6	24.1
50 - 59	18.2	6.1	23.4	13.1	24.2	13.0
60 - 69	13.3	3.5	12.4	6.5	9.9	4.8
70 and over	0.6		0.7		0.9	

Totals may not equal 100 percent due to rounding.

TABLE 6-15

DISTRIBUTION OF ACS CHEMISTS BY DEGREE AND MINORITY CLASSIFICATION, 1976, 1983, 1987 AND 1989*

MINORITY CLASSIFICATION	1976				1983				1987				1989			
	B.S.	M.S.	Ph.D.	Total	B.S.	M.S.	Ph.D.	Total	B.S.	M.S.	Ph.D.	Total	B.S.	M.S.	Ph.D.	Total
Black	1.2	1.8	1.0	1.2	1.8	1.6	1.0	1.3	1.7	1.0	0.9	1.1	1.7	1.2	0.9	1.1
American Indian	0.2	0.0	0.2	0.2	0.4	0.0	0.1	0.2	0.5	0.4	0.4	0.4	0.7	0.4	0.4	0.5
Asian	2.1	2.8	4.2	3.3	3.0	4.5	8.1	6.0	2.3	5.0	7.3	5.7	2.8	5.5	7.3	5.9
Hispanic	0.7	0.8	0.5	0.6	1.0	1.1	0.8	0.9	1.2	0.9	0.9	1.0	2.1	1.7	1.5	1.7
All Minorities	4.2	5.4	5.9	5.3	6.2	7.2	10.0	8.4	6.2	8.0	10.1	8.8	5.3	8.8	10.1	9.2
Non-Minority	95.8	94.6	94.1	94.7	92.6	61.6	88.8	90.2	93.8	92.0	89.9	91.2	94.7	91.8	89.9	90.8

TABLE 6-16

DISTRIBUTION OF ACS CHEMISTS BY SEX AND MINORITY CLASSIFICATION, 1976, 1981, 1983, 1985, 1987, AND 1989*

MINORITY CLASSIFICATION	1976		1981		1983			1985			1987			1989		
	Men	Women	Men	Women	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
Black	1.0	2.8	0.9	3.6	1.1	2.4	1.3	0.9	1.8	1.1	1.1	1.5	1.2	1.0	1.6	1.1
American Indian	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.5	0.3	0.4	0.5	0.6	0.5
Asian	3.0	6.9	5.2	6.7	5.9	6.7	6.0	5.6	6.4	5.7	5.6	6.1	5.7	5.8	6.3	5.9
Hispanic	0.6	0.9	0.6	0.9	0.8	1.2	0.9	0.8	1.2	0.9	1.0	1.0	1.0	1.7	1.6	1.7
All Minorities	4.8	10.7	7.6	12.2	8.0	10.4	8.4	8.4	10.2	8.7	8.7	9.2	8.8	9.0	10.1	9.2
Non-Minority	95.2	89.3	92.4	87.8	91.0	88.8	90.2	90.7	89.2	90.3	91.3	90.8	91.2	91.0	89.9	90.8

* Includes only ACS members who responded to survey.

Note: Totals may not add to 100% due to no responses

FIELD: Physics and Astronomy

SOURCE: Doctorate Records File and Summary Reports: Doctorate Recipients from United States Universities, 1974 - 1988, National Research Council

TABLE 6-19

PHYSICS AND ASTRONOMY PhD AWARDS BY CITIZENSHIP AND VISA TYPE, 1967 - 1988

		U.S.		FOREIGN						
				Total		Immigrant		Non-Immigr		Citizen-ship Unknown
YEAR	TOTAL	No.	%	No.	%	No	%	No.	%	
1967	1,295	1,036	80.0	224	17.3	67	5.2	254	19.6	34
1978	1,422	1,165	81.9	215	15.1					41
1969	1,452	1,194	82.2	221	15.2	58	4.0	278	19.1	35
1970	1,657	1,337	80.7	285	17.2				0.0	33
1971	1,740	1,375	79.0	318	18.3	72	4.1	375	21.6	45
1972	1,635	1,279	78.2	330	20.2				0.0	26
1973	1,590	1,185	74.5	372	23.4	69	4.3	335	21.1	30
1874	1,334	971	72.8	336	25.2					27
1975	1,293	921	71.2	349	27.0	67	5.2	312	24.1	23
1976	1,235	906	73.4	303	24.5					25
1977	1,149	830	72.2	294	25.6	86	7.5	208	18.1	25
1978	1,066	803	75.3	245	23.0	64	6.0	181	17.0	18
1979	1,108	800	72.2	277	25.0	70	6.3	207	18.7	31
1980	985	717	72.8	240	24.4	51	5.2	189	19.2	28
1981	1,015	715	70.4	253	24.9	53	5.2	200	19.7	47
1982	1,013	705	69.6	277	27.3	35	3.5	242	23.9	31
1983	1,042	708	67.9	307	29.5	51	4.9	256	24.6	27
1984	1,080	739	68.4	301	27.9	36	3.3	266	24.6	39
1985	1,078	696	64.6	337	31.3	48	4.5	289	26.8	45
1986	1,187	692	58.3	405	34.1	40	3.4	365	30.7	90
1987	1,236	698	56.5	452	36.6	56	4.5	397	32.1	85
1988	1,302	721	56.5	581	36.6	62	4.8	421	32.3	98
TOTAL	27,914	20,193	73.2	6,922	23.8	985	3.5	4,775	16.4	884

SOURCE: Enrollments and Degrees, American Institute of Physics Publication R151.26, July 1989

TABLE 6-20

PHYSICS DEGREES GRANTED BY LEVEL, SEX AND MINORITY GROUP* STATUS, 1987-88

Type of degrees	Sex	Total no. of degrees	Black	Native American Indian	Hispanic	Oriental	Asian Indian	Arab
Bachelor's	Men	4380	132	4	42	135	55	30
	Women	772	47	0	11	26	11	8
	Total	5152	179	4	53	161	66	38
Master's enroute	Men	901	8	2	17	142	38	12
	Women	134	1	1	1	31	13	2
	Total	1035	9	3	18	173	51	14
Terminal master's	Men	588	16	2	8	56	18	10
	Women	110	2	0	2	20	8	2
	Total	698	18	2	10	76	26	12
Doctor's	Men	1040	10	0	21	157	56	15
	Women	110	2	1	3	27	17	2
	Total	1150	12	1	24	184	73	17

**Minorities in AIP surveys are defined as groups with a low representation in the physics community, but one whose participation has aroused considerable interest.*

SOURCE: Society Membership Profile: Employment Mobility and Career Change, American Institute of Physics, 1989

TABLE 6-21

RACE AND MINORITY STATUS OF AIP MEMBERS BY CITIZENSHIP, 1986

Race/Minority Status	U.S.	Non-U.S.	TOTAL	%
White	5,113	447	5,560	90.2
Oriental/Other Asian	208	271	479	7.8
Black, Amer. Indian & Hispanic	68	7	75	1.2
Other	36	15	51	0.8
Total No. Known	5,425	740	6,165	
No Response	79	19	98	

TABLE 6-22

TYPE OF EMPLOYER, BY SEX, 1986

	MEN	WOMEN
Academic	45	53
University	36	37
Other Academic	9	16
Non-Academic	55	47
Industry/Self Empl	33	24
Government	9	10
FFR&DC	9	7
Nonprofit, Other	4	6
Total Known	5,264	469
No Response	78	10

FIELD: Physics

SOURCE: Graduate Student Survey, American Institute of Physics, AIP Pub. R-207.14, 1982; R-207.16, 1984, R-207.18, 1986, and R-207.20, 1988.

TABLE 6-23

GRADUATE PHYSICS STUDENTS BY MINORITY GROUP AND SEX, 1980-81, 1982-83, 1984-85 AND 1986-87

	1980-1981			1982-1983			1984-1985			1986-87		
MINORITY GROUP	TOTAL	WOMEN	% MINORITY	TOTAL	WOMEN	% MINORITY	TOTAL	WOMEN	% MINORITY	TOTAL	WOMEN	% MINORITY
Black	94	10	1.4	78	9	1.2	77	11	1.2	84	12	1.2
U.S.	70	10	1.1	46	7	0.7	42	8	0.6	52	11	0.7
Foreign	24	0	0.4	32	2	0.5	35	3	0.5	32	1	0.5
American Indian	12	2	0.2	9	1	0.1	12	3	0.2	23	2	0.2
Puerto Rican	21	3	0.3	17	2	0.3	18	6	0.3	19	3	0.3
Mexican American	15	0	0.2	11	2	0.2	16	2	0.2	16	1	0.2
Other Hispanic	139	12	2.1	167	11	2.6	159	21	2.4	122	10	1.7
U.S.	18	2	0.3	23	1	0.4	44	6	0.7	31	0	0.4
Foreign	121	10	1.9	144	10	2.2	115	15	1.8	91	10	1.3
Asian Indian	360	66	5.5	351	68	5.5	374	70	5.7	387	96	5.4
Oriental	700	94	10.8	934	139	14.5	1,250	175	19.2	1,706	268	24.0
U.S.	88	15	1.4	87	16	1.4	101	16	1.5	129	20	1.8
Foreign	612	79	9.4	847	123	13.2	1,149	159	17.6	1,577	248	22.2
Arab	171	12	2.6	210	27	3.3	180	16	2.8	174	16	2.4
Total Minority	1,512	199	23.3	1,777	259	27.6	2,086	304	32.0	2,520	408	35.5
Total Respondents	6,498	650		6,442	709		6,525	783		7,105	924	
Total Population*	9,934			10,429			11,337			12,011		

*All numbers except total population are numbers of respondents. All percentages are calculated on respondents.

FIELD: Physics and Astronomy

SOURCE: Graduate Student Survey, American Institute of Physics, AIP Pub. No. R-207.18, 1986 and R-207.20, 1988

TABLE 6-24

CHARACTERISTICS OF THE GRADUATE PHYSICS STUDENT POPULATION, 1984-85 and 1986-87

CHARACTERISTICS	ALL GRADUATE STUDENTS	FIRST-YEAR GRADUATE STUDENTS	DEGREE RECIPIENTS TERMINAL MASTERS	 DOCTORATE RECIPIENTS
1984-85				
Total Population	11,337	2,863	629	972
Number of Respondents	6,525	1,303	269	605
Percent Women	12%	13%	13%	8%
Percent Men	88%	87%	87%	92%
Percent U.S. Citizenship	64%	61%	80%	69%
Percent Foreign Citizenship	36%	39%	20%	31%
1986-87				
Total Population	12,616	3,162	623	1,105
Number of Respondents	7,105	1,364	295	710
Percent Women	13%	15%	16%	9%
Percent Men	87%	85%	84%	91%
Percent U.S. Citizenship	61%	57%	82%	62%
Percent Foreign Citizenship	39%	43%	18%	38%

TABLE 6-25

CHARACTERISTICS OF THE GRADUATE ASTRONOMY STUDENT POPULATION, 1984-85 and 1986-87

CHARACTERISTICS	ALL GRAD. STUDENTS	% M	% W	FIRST-YEAR GRAD. STUDENTS	% M	% W	DOCTORATE RECIPIENTS	% M	% W
1984-85									
Total Population	716			151			66		
No. of Respondents	406	81	19	80	75	25	55	87	13
Citizenship									
U.S.	78%			72%			89%		
Foreign	22%			28%			11%		
1985-86									
Total Population	755			173			86		
No. of Respondents	512	80	20	88	84	16	49	88	12
Citizenship									
U.S.	75%			76%			88%		
Foreign	25%			24%			12%		

FIELD: Earth, Atmospheric and Marine Sciences

SOURCE: Doctorate Records File and Summary Reports: Doctorate Recipients from United States Universities, 1974 - 1988, National Research Council

TABLE 6-26

PhD AWARDS IN EARTH, ATMOSPHERIC & MARINE SCIENCES BY SUBFIELD AND SEX, 1960 - 1988

	Year of Doctorate														
	1960-69			1970-79			1980-86			1987			1988		
Subfields	Total	Women	%Wom	Total	Women	%Wom	Total	Women	%Wom	Total	Women	%Wom	Total	Women	%Wom
TOTAL	3526	69	2.0	6171	385	6.2	4942	748	15.1	627	114	18.2	726	144	19.8
Atmospheric Physics & Chem				69	4	5.8	136	8	5.9	24	4	16.7	19		0.0
Atmospheric Dynamics				93	5	5.4	168	14	8.3	17	3	17.6	25	2	8.0
Meteorology(9)	310	4	1.3	375	11	2.9	116	8	6.9	17		0.0	35	7	20.0
Atmos & Met Sci, Gen(2)							48	2	4.2	16	4	25.0	14	1	7.1
Atmos & Met Sci, Other				145	13	9.0	176	13	7.4	13	3	23.1	10	1	10.0
Geology(5)							569	104	18.3	114	25	21.9	143	36	25.2
Structural Geology(5)	194	4	2.1	216	12	5.6	72	8							
Geochemistry(4)	41	3	7.3	481	39	8.1	374	64	17.1	31	9	29.0	45	7	15.6
Geophysics & Seismology(6)				254	20	7.9	638	73	11.4	74	11	14.9	83	8	9.6
Geophysics(6)	316	1	0.3	483	14	2.9	0	0							
Paleontology	339	9	2.7	369	44	11.9	178	38	21.3	21	5	23.8	24	3	12.5
Minerology, Petrology(6)	50	6	12.0	472	30	6.4	243	53	21.8	24	8	33.3	19	3	15.8
Fuel Tech & Petro Eng(1)	23		0.0	82	4	4.9	0	0							
Mineral, Petrol, Geochem(6)	755	20	2.6				0	0							
Stratigraphy, Sedimentation	572	4	0.7	485	26	5.4	230	36	15.7	22	2	9.1	30	8	26.7
Geomorph & Glacial Geology	115	4	3.5	228	8	3.5	105	17	16.2	18	2	11.1	7	2	28.6
Applied Geology(1)	27	1	3.7	237	5	2.1	108	5	4.6	5	1	20.0	7	1	14.3
Applied geo, geo eng(1)	233	1	0.4				0	0							
Geological Sciences, Gen(10)							59	16	27.1	18	3	16.7	9	2	22.2
Geological Sciences, Oth(10)							80	16	20.0	29	5	17.2	31	6	19.4
Earth Sciences, General(10)	121	5	4.1	372	17	4.6	131	12							
Earth Sciences, Other(10)	97	1	1.0	264	18	6.8	66	11							
Environmental Sciences(3)				420	51	12.1	361	68	18.8	29	6	20.7	58	16	27.6
Hydrology & Water Resours(7)	65	1	1.5	215	1	0.5	160	13	8.1	18	5	27.8	24	5	20.8
Oceanography	268	5	1.9	843	55	6.5	626	120	19.2	73	13	17.8	82	17	20.7
Marine Sciences(2)							113	20	17.7	38	3	7.9	28	9	32.1
Marine Sciences, Other(8)				68	8	11.8	96	16							
Physical Sciences, Other(2)							89	13	14.6	26	2	7.7	33	10	30.3

(1) In 1962 "Geological engineering" became "Applied geology, geological engineering, economic geology and petroleum engineering" and, in 1969 was split into "Applied geology, geological engineering and economic geology" and "Fuel technology and petroleum engineering." "Fuel technology and petroleum engineering" was discontinued in 1983 and "Applied geology, geological engineering and engineering and economic geology" was replaced by "Applied geology." (2) Introduced in 1983. (3) In 1983 "Environmental sciences" replaced "Environmental sciences, general" and "Environmental sciences, other." (4) "Minerology, petrology, and geochemistry" was split into "Geochemistry" and "Mineralogy, petrology" in 1969. (5) "Structural geology" was deleted in 1983 and "Geology" was introduced. (6) "Geophysics" became "Geophysics, solid earth in 1976 and then "Geophysics and seismology in 1983. (7) Originally listed as "Hydrology." "Water resources" added to title in 1977. (8) Introduced in 1977. Deleted in 1983. (9) Deleted in 1976 - restored in 1983. (10) "Earth science, general" and "Earth sciences, other" deleted in 1983 and "Geological sciences, general" and "Geological sciences, other" were introduced.

FIELD: Geosciences

SOURCE: Enrollment Surveys of the American Geological Institute

TABLE 6-27

DEGREES AWARDED IN U.S. GEOSCIENCE DEPARTMENTS BY DEGREE, FIELD AND SEX, SELECTED YEARS 1975-76 - 1987-88

DEPARTMENT and sex	Bachelors Total	Bachelors Women	Bachelors % W	Masters Total	Masters Women	Masters % W	Doctorates Total	Doctorates Women	Doctorates % W	Total All	Total Women	Total % W
ALL FIELDS												
1975-76	4774	978	20.5	1577	207	13.1	486	38	7.8	6837	1223	17.9
1979-80	6580	1644	25.0	1826	369	20.2	486	49	10.1	8892	2062	23.2
1981-82	7253	1783	24.6	1868	426	22.8	465	78	16.8	9586	2287	23.9
1985-86	5931	1425	24.0	2109	498	23.6	573	124	21.6	8613	2047	23.8
1986-87	4420	1092	24.7	1993	570	28.6	615	111	18.0	7028	1773	25.2
1987-88	3088	774	25.1	1572	405	25.8	386	70	18.1	5046	1249	24.8
Geology												
1975-76	3583	748	20.9	959	130	13.6	254	20	7.9	4796	898	18.7
1979-80	5092	1272	25.0	1218	248	20.4	258	31	12.0	6568	1551	23.6
1981-82	5544	1390	25.1	1149	261	22.7	203	43	21.2	6896	1694	24.6
1985-86	4283	1039	24.3	1305	315	24.1	240	64	26.7	5828	1418	24.3
1986-87	3008	739	24.6	1229	350	28.5	313	67	21.4	4550	1156	25.4
1987-88	2018	481	23.8	999	246	24.6	188	40	21.3	3205	767	23.9
Geophysics												
1975-76	80	14	17.5	92	5	5.4	41	1	2.4	213	20	9.4
1979-80	174	31	17.8	120	15	12.5	58	6	10.3	352	52	14.8
1981-82	217	41	18.9	171	34	19.9	49	4	8.2	437	79	18.1
1985-86	266	59	22.2	140	25	17.9	65	11	16.9	471	95	20.2
1986-87	225	47	20.9	201	42	20.9	97	11	11.3	523	100	19.1
1987-88	183	58	31.7	204	41	20.1	71	8	11.3	458	107	23.4
Oceanography												
Marine 1975-76	238	12	5.0	177	17	9.6	65	6	9.2	480	35	7.3
Science 1979-80	173	38	22.0	208	49	23.6	86	6	7.0	467	93	19.9
1981-82	173	38	22.0	218	52	23.9	103	18	17.5	494	108	21.9
1985-86	169	36	21.3	278	66	23.7	159	35	22.0	606	137	22.6
1986-87	178	34	19.1	171	78	45.6	116	14	12.1	465	126	27.1
1987-88	179	32	17.9	127	47	37.0	47	6	12.8	353	85	24.1
Geological												
Eng. 1975-76	123	9	7.3	66	4	6.1	11	2	18.2	200	15	7.5
1979-80	244	47	19.3	45	7	15.6	11	0	0.0	300	54	18.0
1981-82	487	62	12.7	90	14	15.6	16	0	0.0	593	76	12.8
1985-86	489	82	16.8	100	11	11.0	17	1	5.9	606	94	15.5
1986-87	255	44	17.3	70	11	15.7	15	2	13.3	340	57	16.8
1987-88	157	32	20.4	40	4	10.0	4	0	0.0	201	36	17.9
Geophysical												
Eng. 1975-76	24	1	4.2	9	0	0.0	2	0	0.0	35	1	2.9
1979-80	49	8	16.3	22	2	9.1	7	0	0.0	78	10	12.8
1981-82	62	8	12.9	13	1	7.7	2	0	0.0	77	9	11.7
1985-86	11	1	9.1	6	0	0.0	0	0		17	1	5.9
1986-87	44	11	25.0	19	3	15.8	3	2	66.7	66	16	24.2
1987-88	0	0		2	1	50.0	0	0		2	1	50.0
Geochemistry												
1975-76	5	2	40.0	43	8	18.6	27	1	3.7	75	11	14.7
1979-80	14	3	21.4	44	9	20.5	26	1	3.8	84	13	15.5
1981-82	17	6	35.3	28	10	35.7	30	3	10.0	75	19	25.3
1985-86	24	4	16.7	39	12	30.8	24	4	16.7	87	20	23.0
1986-87	13	0	0.0	33	9	27.3	13	3	23.1	59	12	20.3
1987-88	5	1	20.0	27	6	22.2	17	3	17.6	49	10	20.4

FIELD: Geosciences

SOURCE: Enrollment Surveys of the American Geological Institute

TABLE 6-27 (continued)

DEGREES AWARDED IN U.S. GEOSCIENCE DEPARTMENTS BY DEGREE, FIELD AND SEX, SELECTED YEARS 1975-76 - 1987-88

DEPARTMENT	Bachelors			Masters			Doctorates			Total		
and sex	Total	Women	% W	Total	Women	% W	Total	Women	% W	All	Women	% W
Hydrology												
1975-76	45	9	20.0	68	10	14.7	33	1	3.0	146	20	13.7
1979-80	22	9	40.9	44	2	4.5	11	0	0.0	77	11	14.3
1981-82	23	8	34.8	56	13	23.2	8	1	12.5	87	22	25.3
1985-86	30	6	20.0	84	16	19.0	16	1	6.3	130	23	17.7
1986-87	56	18	32.1	100	25	25.0	6	1	16.7	162	44	27.2
1987-88	17	3	17.6	48	13	27.1	5	1	20.0	70	17	24.3
Minerology												
1975-76	2	2	100.0	21	3	14.3	9	0	0.0	8	8	100.0
1979-80	5	3	60.0	14	4	28.6	6	0	0.0	25	7	28.0
1981-82	59	10	16.9	21	1	4.8	9	1	11.1	89	12	13.5
1985-86	0	0	ERR	5	4	80.0	3	0	0.0	8	4	50.0
1986-87	6	1	16.7	10	3	30.0	2	0	0.0	18	4	22.2
1987-88	12	0	0.0	8	1	12.5	1	0	0.0	21	1	4.8
Paleontology												
1975-76	11	4	36.4	37	9	24.3	26	5	19.2	74	18	24.3
1979-80	16	6	37.5	22	6	27.3	8	1	12.5	46	13	28.3
1981-82	4	1	25.0	26	8	30.8	9	2	22.2	39	11	28.2
1985-86	12	7	58.3	29	10	34.5	12	2	16.7	53	19	35.8
1986-87	11	3	27.3	25	8	32.0	10	3	30.0	46	14	30.4
1987-88	10	4	40.0	34	13	38.2	16	4	25.0	60	21	35.0
Soil Science												
1975-76	8	0	0.0	1	0	0.0	1	0	0.0	10	0	0.0
1979-80	46	16	34.8	3	0	0.0	0	0		49	16	32.7
1981-82	8	2	25.0	0	0		0	0		8	2	25.0
1985-86	8	2	25.0	0	0		0	0		8	2	25.0
1986-87	21	8	38.1	19	6	31.6	5	1	20.0	45	15	33.3
1987-88	4	1	25.0	1	0	0.0	0	0		5	1	20.0
Environmental												
Sci. 1975-76	196	66	33.7	42	4	9.5	7	0	0.0	245	70	28.6
1979-80	335	88	26.3	33	11	33.3	9	0	0.0	377	99	26.3
1981-82	240	86	35.8	34	17	50.0	17	3	17.6	291	106	36.4
1985-86	244	82	33.6	38	13	34.2	3	0	0.0	285	95	33.3
1986-87	162	41	25.3	65	21	32.3	9	2	22.2	236	64	27.1
1987-88	143	50	35.0	37	16	43.2	19	4	21.1	199	70	35.2
Earth Science												
Teaching 1975-76	186	53	28.5	31	9	29.0	1	0	0.0	218	62	28.4
1979-80	91	38	41.8	14	5	35.7	0	0		105	43	41.0
1981-82	56	22	39.3	18	9	50.0	0	0		74	31	41.9
1985-86	103	34	33.0	11	4	36.4	0	0		114	38	33.3
1986-87	109	54	49.5	19	6	31.6	1	1	100.0	129	61	47.3
1987-88	109	38	34.9	8	4	50.0	0	0		117	42	35.9
Earth Science,												
General 1975-76	273	58	21.2	31	8	25.8	9	2	22.2	313	68	21.7
1979-80	319	85	26.6	39	11	28.2	6	4	66.7	364	100	27.5
1981-82	363	109	30.0	44	6	13.6	19	3	15.8	426	118	27.7
1985-86	292	73	25.0	74	22	29.7	34	6	17.6	400	101	25.3
1986-87	332	92	27.7	32	8	25.0	25	4	16.0	389	104	26.7
1987-88	251	74	29.5	37	13	35.1	18	4	22.2	306	91	29.7

Note: During recent years the response rate of degree granting deprtments has been about 80%.
Thus, a good estimate of the actual national production could be 1.2 times the above data.

FIELD: Geosciences

SOURCE: Enrollment Surveys of the American Geological Institute

TABLE 6-28

ENROLLMENT IN GEOSCIENCE DEPARTMENTS BY EDUCATIONAL LEVEL, FIELD AND SEX, SELECTED YEARS 1980-81 - 1987-88

DEPARTMENT		Freshmen and Soph			Juniors			Seniors			Undergraduates			Masters			Doctorates		
and year		Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
ALL FIELDS																			
	1980-81	11752	2811	23.9	9454	2336	24.7	10738	2652	24.7	31944	7799	24.4	7370	1794	24.3	2810	530	18.9
	1981-82	13247	3121	23.6	10059	2504	24.9	11046	2727	24.7	34352	8352	24.3	7349	1825	24.8	2759	558	20.2
	1982-83	13146	2994	22.8	10845	2662	24.5	12901	3176	24.6	36892	8832	23.9	7511	1869	24.9	2897	621	21.4
	1985-86*	7966	2124	26.7	6615	1705	25.8	10522	2629	25.0	25102	6459	25.7	9017	2323	25.8	4296	1012	23.6
	1986-87*	5734	1666	29.1	5020	1399	27.9	8220	2156	26.2	18974	5221	27.5	7854	2105	26.8	4209	1019	24.2
	1987-88*	8071	3003	37.2	4281	1293	30.2	6245	1618	25.9	18598	5913	31.8	7281	1923	26.4	4108	940	22.9
Geology																			
	1980-81	9113	2114	23.2	7511	1817	24.2	8423	2059	24.4	25047	5990	23.9	4883	1164	23.8	1257	245	19.5
	1981-82	10390	2307	22.2	8009	2013	25.1	8756	2151	24.6	27155	6471	23.8	5060	1249	24.7	1116	223	20.0
	1982-83	9943	2263	22.8	8574	2122	24.7	10210	2557	25.0	28727	6942	24.2	5007	1270	25.4	1150	250	21.7
	1985-86	4662	1249	26.8	4513	1141	25.3	7441	1863	25.0	16617	4254	25.6	6104	1590	26.0	2004	499	24.9
	1986-87	3484	968	27.8	3209	849	26.5	5370	1376	25.6	12063	3193	26.5	4818	1284	26.6	1980	501	25.3
	1987-88	4555	1560	34.2	2781	810	29.1	4098	1016	24.8	11434	3386	29.6	4786	1225	25.6	2156	480	22.3
Geophysics																			
	1980-81	290	64	22.1	279	63	22.6	304	53	17.4	873	180	20.6	534	88	16.5	359	52	14.5
	1981-82	303	59	19.5	221	52	23.5	353	78	22.1	877	189	21.6	499	84	16.8	393	63	16.0
	1982-83	449	99	22.0	362	74	20.4	383	84	21.9	1194	257	21.5	508	90	17.7	422	66	15.6
	1985-86	188	49	26.0	173	35	20.4	437	113	26.0	798	198	24.8	584	122	20.9	578	104	17.9
	1986-87	163	45	27.7	193	61	31.8	480	96	20.1	835	203	24.3	690	141	20.5	678	121	17.9
	1987-88	236	76	32.3	114	3	2.2	286	65	22.7	636	144	22.6	596	100	16.8	575	95	16.5
Oceanography																			
Marine	1980-81	453	87	19.2	188	40	21.3	240	56	23.3	881	183	20.8	781	227	29.1	681	142	20.9
Science	1981-82	487	112	23.0	198	30	15.2	202	36	17.8	887	178	20.1	740	218	29.5	699	160	22.9
	1982-83	507	110	21.7	227	49	21.6	226	43	19.0	960	202	21.0	781	216	27.7	677	169	25.0
	1985-86	511	105	20.5	216	49	22.6	249	51	20.6	976	205	21.0	789	280	35.5	917	243	26.5
	1986-87	755	224	29.6	394	126	32.1	389	73	18.6	1538	423	27.5	710	234	32.9	718	200	27.9
	1976-88	1413	630	44.6	293	83	28.2	336	78	23.0	2041	790	38.7	615	224	36.4	636	168	26.3
Geological																			
Eng.	1980-81	621	144	23.2	336	67	19.9	426	72	16.9	1303	283	20.5	128	22	17.2	36	0	0.0
	1981-82	739	159	21.5	405	76	18.8	483	98	20.3	1626	333	20.5	137	24	17.5	31	1	3.2
	1982-83	1040	203	19.5	656	104	15.9	856	120	14.0	2552	427	16.7	292	46	15.8	95	7	7.4
	1985-86	400	83	20.7	365	63	17.4	773	139	18.0	1538	285	18.6	279	27	9.6	67	1	1.9
	1986-87	191	51	26.8	144	36	25.2	434	70	16.1	769	158	20.5	245	39	15.8	106	8	7.1
	1976-88	118	29	24.5	110	28	25.0	288	49	17.0	515	105	20.4	211	31	14.8	86	8	8.7
Geophysical																			
Eng.	1980-81	96	21	21.9	60	14	23.3	79	14	17.7	235	49	20.9	92	13	14.1	8	0	0.0
	1981-82	110	23	20.9	80	20	25.0	94	14	14.9	284	57	20.1	84	11	13.1	18	0	0.0
	1982-83	151	35	23.2	73	10	13.7	104	23	22.1	328	68	20.7	78	13	16.7	17	1	5.9
	1985-86	88	20	22.2	51	6	11.9	177	39	22.1	316	65	20.5	89	21	23.3	21	4	17.6
	1986-87	64	16	25.5	48	5	10.5	76	23	29.5	188	44	23.3	49	11	23.1	31	9	28.0
	1976-88	19	6	33.3	6	3	40.0	25	5	20.0	50	14	27.5	23	3	11.1	5	1	25.0
Geochemistry																			
	1980-81	17	1	5.9	17	0	0.0	25	9	36.0	59	10	16.9	226	67	29.6	180	33	18.3
	1981-82	25	5	20.0	27	3	11.1	22	4	18.2	74	12	16.2	182	50	27.5	195	45	23.1
	1982-83	7	0	0.0	14	3	21.4	18	3	16.7	39	6	15.4	124	42	33.9	169	42	24.9
	1985-86	39	10	25.0	30	15	48.0	37	10	26.7	106	34	32.2	213	65	30.3	212	66	31.0
	1986-87	3	1	50.0	6	1	20.0	23	3	11.1	31	5	16.0	138	44	31.8	174	54	30.9
	1996-07	9	1	14.3	5	4	75.0	14	3	18.2	28	8	27.3	140	44	31.3	191	60	31.4

SOURCE: Enrollment Surveys of the American Geological Institute

TABLE 6-28 (continued)

ENROLLMENT IN GEOSCIENCE DEPARTMENTS BY EDUCATIONAL LEVEL, FIELD AND SEX, SELECTED YEARS 1980-81 - 1987-88

DEPARTMENT		Freshmen and Soph			Juniors			Seniors			Undergraduates			Masters			Doctorates		
and year		Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
Hydrology																			
	1980-81	20	3	15.0	31	5	16.1	42	8	19.0	93	16	17.2	195	42	21.5	38	6	15.8
	1981-82	24	6	25.0	29	6	20.7	38	7	18.4	91	19	20.9	205	54	26.3	49	7	14.3
	1982-83	24	5	20.8	44	14	31.8	42	6	14.3	110	25	22.7	194	41	21.1	59	14	23.7
	1985-86	29	6	20.8	43	7	17.1	62	17	27.5	134	30	22.7	418	100	23.9	90	15	16.2
	1986-87	86	25	29.0	71	21	29.6	131	36	27.6	289	83	28.6	474	111	23.5	91	18	19.2
	1987-88	40	13	31.3	25	5	20.0	51	11	22.0	116	29	24.7	404	96	23.8	79	20	25.4
Mineralogy																			
	1980-81	4	0	0.0	4	1	25.0	4	0	0.0	12	1	8.3	55	17	30.9	36	6	16.7
	1981-82	16	3	18.8	99	18	18.2	3	1	33.3	118	22	18.6	49	12	24.5	49	7	14.3
	1982-83	66	8	12.1	64	6	9.4	93	15	16.1	223	29	13.0	100	21	21.0	68	16	23.5
	1985-86	39	4	9.4	16	5	30.8	11	5	44.4	66	13	20.4	20	9	43.8	33	10	29.6
	1986-87	10	1	12.5	25	3	10.0	20	6	31.3	55	10	18.2	40	11	28.1	38	6	16.7
	1987-88	28	5	18.2	8	0	0.0	16	1	7.7	51	6	12.2	30	10	33.3	43	16	38.2
Paleontology																			
	1980-81	8	1	12.5	13	5	38.5	8	1	12.5	29	7	24.1	120	43	35.8	96	22	22.9
	1981-82	25	7	28.0	89	19	21.3	21	6	28.6	135	32	23.7	94	31	33.0	105	31	29.5
	1982-83	9	2	22.2	22	5	22.7	13	4	30.8	44	11	25.0	87	26	29.9	83	24	28.9
	1985-86	12	5	40.0	16	4	23.1	22	9	38.9	50	17	34.1	106	32	29.9	109	26	23.6
	1986-87	1	0	0.0	28	4	13.6	24	9	36.8	53	13	23.8	105	38	35.7	143	36	25.4
	1987-88	15	4	25.0	4	0	0.0	15	4	25.0	34	8	22.2	90	40	44.4	155	44	28.2
Soil Science																			
	1980-81	8	1	12.5	41	20	48.8	53	23	43.4	102	44	43.1	8	3	37.5	2	1	50.0
	1981-82	25	7	28.0	10	2	20.0	15	3	20.0	50	12	24.0	0	0		1	1	100.0
	1982-83	9	2	22.2	11	3	27.3	10	2	20.0	30	7	23.3	0	0		1	0	0.0
	1985-86	28	4	13.0	17	4	21.4	27	6	22.7	72	13	18.6				0	0	
	1986-87	53	16	31.0	50	18	35.0	46	18	37.8	149	51	34.5	66	26	39.6	18	5	28.6
	1987-88	15	4	25.0	34	13	37.0	18	5	28.6	66	21	32.1	4	0	0.0	0	0	ERR
Environmental																			
Sci.	1980-81	425	180	42.4	373	124	33.2	451	118	26.2	1249	422	33.8	125	42	33.6	36	11	30.6
	1981-82	380	218	57.4	350	91	26.0	368	97	26.4	1098	406	37.0	124	42	33.9	29	6	20.7
	1982-83	205	70	34.1	237	91	38.4	262	104	39.7	704	265	37.6	134	60	44.8	56	14	25.0
	1985-86	893	239	26.8	423	139	32.9	449	152	34.0	1765	530	30.1	128	49	38.1	46	16	34.2
	1986-87	248	83	33.3	241	94	38.9	353	138	39.0	841	314	37.3	258	78	30.1	83	19	22.7
	1987-88	276	101	36.7	289	106	36.8	336	131	39.0	901	339	37.6	156	73	46.4	109	24	21.8
Earth Science																			
Teaching	1980-81	84	29	34.5	140	63	45.0	148	63	42.6	372	155	41.7	77	28	36.4	2	0	0.0
	1981-82	85	32	37.6	109	47	43.1	111	53	47.7	305	132	43.3	62	20	32.3	3	2	66.7
	1982-83	83	39	47.0	102	49	48.0	142	77	54.2	327	165	50.5	54	21	38.9	2	1	50.0
	1985-86	221	83	37.6	188	63	33.5	187	60	32.0	595	206	34.6	77	26	33.3	5	0	0.0
	1986-87	210	85	40.5	234	89	38.0	326	123	37.5	770	296	38.5	114	51	45.1	8	4	50.0
	1987-88	331	140	42.3	274	128	46.6	324	123	37.8	929	390	42.0	126	51	40.6	14	5	36.4
Earth Science,																			
General	1980-81	613	166	27.1	461	117	25.4	535	176	32.9	1609	459	28.5	146	38	26.0	79	12	15.2
	1981-82	639	183	28.6	433	127	29.3	580	179	30.9	1652	489	29.6	113	30	26.5	71	12	16.9
	1982-83	653	158	24.2	459	132	28.8	542	138	25.5	1654	428	25.9	152	23	15.1	90	17	17.3
	1985-86	856	270	31.5	563	173	30.7	651	165	25.3	2071	607	29.3	210	43	20.3	215	43	19.9
	1986-87	468	151	32.4	379	93	24.4	549	188	34.2	1395	431	30.9	149	38	25.2	144	39	27.0
	1986-87	1010	434	42.6	340	113	33.1	439	128	29.1	1796	674	37.5	100	26	26.3	59	20	34.0

* Because not all departments returned questionnaires, 1985-86 and 1987-88 data are 1.2 times and 1986-87 data are 1.25 times the actual data provided by the AGI in order to present totals more likely representative of all degree granting departments.

FIELD: Geosciences

SOURCE: Surveys of the American Geological Institute

TABLE 6-29

MINORITY ENROLLMENT IN GEOSCIENCE DEPARTMENTS BY EDUCATIONAL LEVEL AND SEX, 1987-88

	Total	Black			Hispanic			Native American			Asian/Pacific Is			Total Minority		
	Enrolled	Men	Women	%B	Men	Women	%B	Men	Women	%B	Men	Women	%B	Men	Women	%M
Fresh/Soph	6,457	106	38	2.2	280	198	7.4	33	10	0.7	53	41	1.5	472	287	11.8
Junior	3,445	35	28	1.8	38	10	1.4	15	4	0.6	20	12	0.9	108	54	4.7
Senior	5,226	42	20	1.2	73	16	1.7	23	9	0.6	32	22	1.0	170	67	4.5
Undergraduate	9,944	183	86	2.7	391	224	6.2	71	23	0.9	105	75	1.8	750	408	11.6
MA/MS	5,825	29	19	0.8	43	14	1.0	9	2	0.2	72	16	1.5	153	51	3.5
PhD	3,286	14	8	0.7	41	9	1.5	17	8	0.8	103	17	3.7	175	42	6.6
Graduate	9,111	43	27	0.8	84	23	1.2	26	10	0.4	175	33	2.3	328	93	4.6
Total	19,055	226	113	1.8	475	247	3.8	97	33	0.7	280	108	2.0	1,078	501	8.3

TABLE 6-30

MINORITIES RECEIVING GEOSCIENCE DEGREES BY DEGREE AND SEX, 1987-88

	Total	Black			Hispanic			Native American			Asian/Pacific Is			Total Minority		
		Men	Women	%B	Men	Women	%B	Men	Women	%B	Men	Women	%B	Men	Women	%M
BA/BA	3,088	16	5	0.7	18	4	0.7	24	7	1.0	14	5	0.6	72	21	3.0
MA/MS	1,572	11	4	1.0	9	4	0.8	5	1	0.4	11	5	1.0	36	14	3.2
PhD	386	3	1	1.0	3	3	1.6	2	3	1.3	16	2	4.7	24	9	8.5
Total	5,046	30	10	0.8	30	11	0.8	31	11	0.8	41	12	1.1	132	44	3.5

FIELD: Geological Sciences

SOURCE: "Women in Academia: Students and Professors Revisited," **GEOLOGY**, V. 15, August 1987.

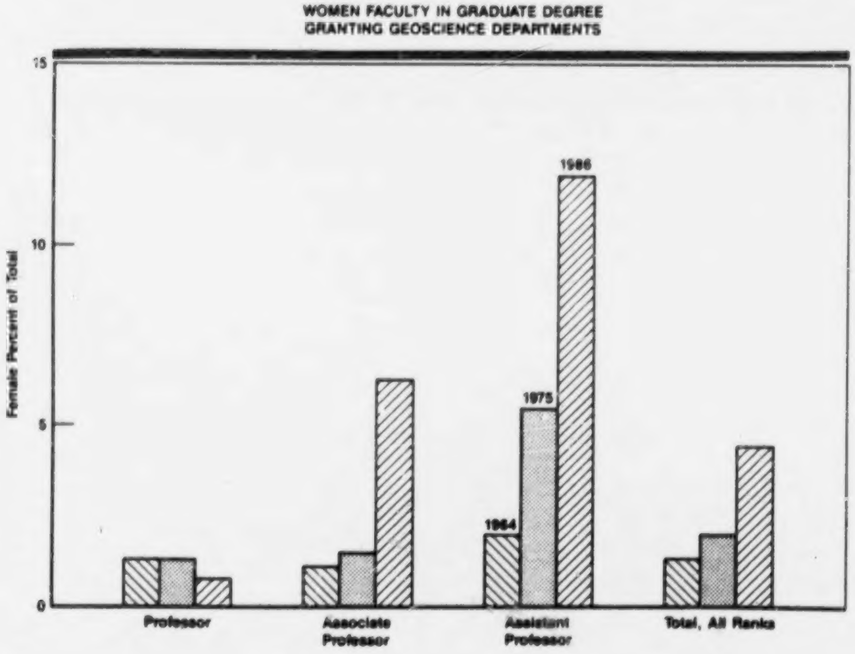
TABLE 6-31

FACULTY IN U.S. DEPARTMENTS OF GEOLOGICAL SCIENCES, 1986-87

Graduate Depts. (M.S./M.A. & PhD)	**Professor**	**Associate Professor**	**Assistant Professor**	**Lecturer/ Instructor**	**All Ranks Total**
Men	1,958	855	620	97	3,530
Women	15	57	83	14	169
Total	1,973	912	703	111	3,699
Percent Women	0.76	6.3	11.8	12.6	4.6
Undergraduate Dept. (2 Year and BA/BS)					
Men	754	296	307	202	1,559
Women	25	26	47	47	145
Total	779	322	354	249	1,704
Percent Women	3.2	8.1	13.3	18.9	8.5

Note: Male-Female distinction made on basis of first name

CHART 6-1



FIELD: Mathematics, Computer Sciences and Statistics

SOURCE: Doctorate Records File and Doctorate Recipients from United States Universities, Summary Reports, 1972-1988, National Research Council

TABLE 6-32

PhD AWARDS IN MATHEMATICS AND COMPUTER/INFORMATION SCIENCE BY SUBFIELD AND SEX, 1960 - 1988

	Year of Doctorate														
	1960-69			1970-79			1980-86			1987			1988		
Subfields	Total	Women	%Wom	Total	Women	%Wom	Total	Women	%Wom	Total	Women	%Wom	Total	Women	%Wom
TOTAL MATH & COMP SCIENCE	6407	363	5.7	11240	1130	10.1	7971	1119	14.0	1190	190	16.0	1263	177	14.0
MATHEMATICS TOTAL	6407	363	5.7	10877	1086	10.0	5699	864	15.2	740	125	16.9	749	121	16.2
Applied Mathematics	831	26	3.1	1181	67	5.7	931	138	14.8	131	29	22.1	142	17	12.0
Algebra	949	88	9.3	1330	209	15.7	470	92	19.6	57	10	17.5	54	10	18.5
Analysis & Funct Anal(1)	1616	84	5.2	1901	158	8.3	688	83	12.1	86	6	7.0	76	15	19.7
Geometry	215	14	6.5	302	35	11.6	275	22	8.0	30	3	10.0	44	4	9.1
Logic	183	12	6.6	293	31	10.6	188	17	9.0	18	2	11.1	19	2	10.5
Number Theory	181	23	12.7	270	32	11.9	182	21	11.5	15	2	13.3	26	5	19.2
Probability & Math Stat(3)	894	44	4.9	1469	179	12.2	1252	236	18.8	143	36	25.2	152	31	20.4
Topology	790	30	3.8	975	85	8.7	347	56	16.1	41	3	7.3	27	3	11.1
Computing Theory & Pract	255	5	2.0	1345	99	7.4	105	7	6.7	14	4	28.6	12	3	25.0
Operations Research(2)				246	19	7.7	233	36	15.5	22	1	4.5	29	3	10.3
Mathematics, General	276	19	6.9	999	116	11.6	703	90	12.8	137	22	16.1	135	20	14.8
Mathematics, Other	217	18	8.3	566	56	9.9	325	66	20.3	46	7	15.2	33	8	24.2
							0	0							
COMPUTER/INFORMATION SCI				363	44	12.1	2272	255	11.2	450	65	14.4	514	56	10.9
Computer Science(4)				363	44	12.1	2045	204	10.0	384	51	13.3	442	39	8.8
Info Sciences & Systems(5)							227	51		66	14	21.2	72	17	23.6

(1) "Anaylisis" before 1968. (2) Introduced in 1973. (3) "Math statistics" removed from the name of this subfield in 1969, but restored in 1972. (4) Introduced in 1977. (5) Introduced in 1983.

SOURCE: National Science Foundation Estimates

TABLE 6-33

EMPLOYED NATURAL SCIENTISTS, 1974 - 1986

	PHYSICAL			MATHEMATICAL			COMPUTER			ENVIRONMENTAL			LIFE		
YEAR	TOTAL	WOMEN	% W	TOTAL	WOMEN	% W	TOTAL	WOMEN	% W	TOTAL	WOMEN	% W	TOTAL	WOMEN	% W
1974	201,400	15,900	7.9	82,800	13,500	16.3	166,200	13,300	8.0	69,100	4,300	6.2	238,600	45,200	18.9
1976	188,900	16,200	8.6	48,600	11,500	23.7	119,000	20,600	17.3	54,800	3,900	7.1	213,500	33,900	15.9
1978	208,300	18,500	8.9	53,700	13,100	24.4	177,000	40,200	22.7	68,900	7,200	10.4	244,100	39,600	16.2
1980	215,200	20,800	9.7	64,300	18,000	28.0	207,800	57,900	27.9	77,600	10,700	13.8	287,500	53,100	18.5
1982	227,400	22,300	9.8	79,400	25,300	31.9	299,000	78,700	26.3	87,200	12,400	14.2	337,100	68,600	20.4
1984	254,100	28,300	11.1	100,400	21,900	21.8	436,800	114,100	26.1	98,100	10,300	10.5	353,300	82,600	23.4
1986	288,400	38,300	13.3	131,000	33,900	25.9	562,600	162,500	28.9	111,300	12,900	11.6	411,800	102,800	25.0
TOTAL	1,583,700	160,300	10.1	560,200	137,200	24.5	1,968,400	487,300	24.8	567,000	61,700	10.9	2,085,900	425,800	20.4

FIELD: Mathematical Sciences

SOURCE: Doctorate Records File and Doctorate recipients from United States Universities, Summary Reports, 1972-1988, National Research Council

TABLE 6-34

MATHEMATICAL SCIENCES PhD AWARDS BY CITIZENSHIP AND VISA TYPE, 1960 - 1988

YEAR	TOTAL	U.S.		FOREIGN						Citizenship Unknown
				Total		Immigrant		Non-Immigr		
		No.	%	No.	%	No	%	No.	%	
1960	291	233	80.1	55	18.9	11	3.8	44	15.1	3
1961	332	272	81.9	51	15.4	7	2.1	44	13.3	9
1962	388	312	80.4	72	18.6	7	1.8	65	16.8	4
1963	483	401	83.0	72	14.9	11	2.3	61	12.6	10
1964	588	489	83.2	89	15.1	9	1.5	80	13.6	10
1965	685	578	84.4	92	13.4	16	2.3	76	11.1	15
1966	769	634	82.4	119	15.5	22	2.9	97	12.6	16
1967	830	692	83.4	119	14.3	27	3.3	92	11.1	19
1978	970	798	82.3	154	15.9	42	4.3	112	11.5	18
1969	1,065	887	83.3	163	15.3	49	4.6	114	10.7	15
1970	1,224	1,018	83.2	191	15.6	57	4.7	134	10.9	15
1971	1,238	1,012	81.7	214	17.3	62	5.0	152	12.3	12
1972	1,281	1,030	80.4	234	18.3	65	5.1	169	13.2	17
1973	1,232	951	77.2	254	20.6	81	6.6	173	14.0	27
1974	1,208	873	72.3	295	24.4	71	5.9	224	18.5	40
1975	1,147	848	73.9	272	23.7	75	6.5	197	17.2	27
1976	1,003	748	74.6	238	23.7	55	5.5	183	18.2	17
1977	959	710	74.0	224	23.4	54	5.6	170	17.7	25
1978	959	704	73.4	233	24.3	52	5.4	181	18.9	22
1979	977	712	72.9	244	25.0	63	6.4	181	18.5	21
1980	963	676	70.2	258	26.8	76	7.9	182	18.9	29
1981	960	648	67.5	289	30.1	63	6.6	226	23.5	23
1982	720	458	63.6	233	32.4	41	5.7	192	26.7	29
1983	701	411	58.6	255	36.4	46	6.6	209	29.8	35
1984	699	407	58.2	277	39.6	45	6.4	232	33.2	15
1985	689	376	54.6	281	40.8	42	6.1	239	34.7	32
1986	730	367	50.3	308	42.2	36	4.9	272	37.3	55
1987	740	345	46.6	352	47.6	51	6.9	301	40.7	43
1988	749	341	45.5	347	46.3	43	5.7	304	40.6	61
TOTAL	24,580	17,931	73.8	5,985	23.7	1,279	5.2	4,706	18.5	664

FIELD: Mathematical and Computer Sciences

SOURCE: Earned Degrees Conferred, 1971-1987, National Center for Education Statistics

TABLE 6-35

PhD DEGREES IN THE MATHEMATICAL AND COMPUTER SCIENCES BY SEX AND SUBFIELD (1950 - 1987)

					Mathematical/Computer Sciences Fields									
					Mathematics					Computer/Information Sciences				
Year	Total Math/CS	Men	Women	%W	No.	%Math	Men	Wom	%W	No.	%CS	Men	Wom	%W
1950	160	151	9	5.6	160	100	151	9	5.6					
1951	184	175	9	4.9	184	100	175	9	4.9					
1952	206	195	11	5.3	206	100	195	11	5.3					
1953	241	227	14	5.8	241	100	227	14	5.8					
1954	227	213	14	6.2	227	100	213	14	6.2					
1955	250	239	11	4.4	250	100	239	11	4.4					
1956	235	225	10	4.3	235	100	225	10	4.3					
1957	249	236	13	5.2	249	100	236	13	5.2					
1958	247	232	15	6.1	247	100	232	15	6.1					
1959	282	267	15	5.3	282	100	267	15	5.3					
50-59	2,281	2,160	121	5.3	2,281	1,000	2,160	121	5.3					
1960	303	285	18	5.9	303	100	285	18	5.9					
1961	344	327	17	4.9	344	100	327	17	4.9					
1962	396	372	24	6.1	396	100	372	24	6.1					
1963	490	454	36	7.3	490	100	454	36	7.3					
1964	596	567	29	4.9	596	100	567	29	4.9					
1965	688	628	60	8.7	682	99	623	59	8.7	6	1	5	1	16.7
1966	801	744	57	7.1	782	98	725	57	7.3	19	2	19	0	0.0
1967	870	810	60	6.9	832	96	773	59	7.1	38	4	37	1	2.6
1968	903	931	52	5.3	947	96	895	52	5.5	36	4	36	0	0.0
1969	1161	1091	70	6.0	1097	94	1029	68	6.2	64	6	62	2	3.1
60-69	6,632	6,209	423	6.4	6,469	98	6,050	419	6.5	163	2	159	4	2.5
1970	1343	1245	98	7.3	1236	92	1140	96	7.8	107	8	105	2	1.9
1971	1327	1231	96	7.2	1199	90	1106	93	7.8	128	10	125	3	2.3
1972	1295	1194	101	7.8	1128	87	1039	89	7.9	167	13	155	12	7.2
1973	1264	1147	117	9.3	1068	84	966	102	9.6	196	16	181	15	7.7
1974	1229	1120	109	8.9	1031	84	931	100	9.7	198	16	189	9	4.5
1975	1188	1064	124	10.4	975	82	865	110	11.3	213	18	199	14	6.6
1976	1100	983	117	10.6	856	78	762	94	11.0	244	22	221	23	9.4
1977	1039	911	128	12.3	823	79	714	109	13.2	216	21	197	19	8.8
1978	1001	862	139	13.9	805	80	681	124	15.4	196	20	181	15	7.7
1979	966	814	152	15.7	730	76	608	122	16.7	236	24	206	30	12.7
70-79	11,752	10,571	1,181	10.0	9,851	84	8,812	1,039	10.5	1,901	16	1,759	142	7.5
1980	964	837	127	13.2	724	75	624	100	13.8	240	25	213	27	11.3
1981	980	841	139	14.2	728	74	614	114	15.7	252	26	227	25	9.9
1982	932	817	115	12.3	681	73	587	94	13.8	251	27	230	21	8.4
1983	960	810	150	15.6	698	73	582	116	16.6	262	27	228	34	13.0
1984	946	794	152	16.1	695	73	569	126	18.1	251	27	225	26	10.4
1985	947	813	134	14.1	699	74	590	109	15.6	248	26	223	25	10.1
1986	1086	917	169	15.6	742	68	618	124	16.7	344	32	299	45	13.1
1987	1099	921	178	16.2	725	66	599	126	17.4	374	34	322	52	13.9
80-87	7,914	6,750	1,164	14.7	5,692	577	4,783	909	16.0	2,222	223	1,967	255	11.5
TOTAL	28,579	25,690	2,889	10.1	24,293	85	21,805	2,488	10.2	4,286	15	3,885	401	9.4

SOURCE: Earned Degrees Conferred, 1971-1987, National Center for Education Statistics

TABLE 6-34 (continued)

MASTERS DEGREES IN THE MATHEMATICAL AND COMPUTER SCIENCES BY SUBFIELD AND SEX (1950 - 1987)

					Mathematical/Computer Sciences Fields									
					Mathematics					Computer & Info Sciences				
Year	Total Math/CS	Men	Women	%W	No.	%Math	Men	Women	%W	No.	%CS	Men	Women	%W
1950	974	784	190	19.5	974	100	784	190	19.5					
1951	1109	929	180	16.2	1109	100	929	180	16.2					
1952	802	663	139	17.3	802	100	663	139	17.3					
1953	677	565	112	16.5	677	100	565	112	16.5					
1954	706	579	127	18.0	706	100	579	127	18.0					
1955	761	613	148	19.4	761	100	613	148	19.4					
1956	898	719	179	19.9	898	100	719	179	19.9					
1957	965	777	188	19.5	965	100	777	188	19.5					
1958	1234	994	240	19.4	1234	100	994	240	19.4					
1959	1499	1188	311	20.7	1499	100	1188	311	20.7					
50-59	9,625	7811	1,814	18.8	9,625	100	7,811	1,814	18.8					
1960	1765	1428	337	19.1	1765	100	1428	337	19.1					
1961	2238	1772	466	20.8	2238	100	1772	466	20.8					
1962	2680	2179	501	18.7	2680	100	2179	501	18.7					
1963	3323	2665	658	19.8	3323	100	2665	658	19.8					
1964	3603	2914	689	19.1	3603	100	2914	689	19.1					
1965	4294	3482	812	18.9	4148	97	3342	806	19.4	146	3	140	6	4.1
1966	5010	3992	1018	20.3	4772	95	3771	1001	21.0	238	5	221	17	7.1
1967	5733	4423	1310	22.9	5284	92	4000	1284	24.3	449	8	423	26	5.8
1968	6081	4720	1361	22.4	5533	91	4202	1331	24.1	548	9	518	30	5.5
1969	6735	5169	1566	23.3	5723	85	4230	1493	26.1	1012	15	939	73	7.2
60-69	41,462	32744	8,718	21.0	39,069	94	30,503	8,566	21.9	2,393	6	2,241	152	6.4
1970	7107	5298	1809	25.5	5648	79	3974	1674	29.6	1459	21	1324	135	9.3
1971	6789	5101	1688	24.9	5201	77	3677	1524	29.3	1588	23	1424	164	10.3
1972	7186	5409	1777	24.7	5209	72	3657	1552	29.8	1977	28	1752	225	11.4
1973	7146	5416	1730	24.2	5033	70	3528	1505	29.9	2113	30	1888	225	10.6
1974	7116	5323	1793	25.2	4840	68	3340	1500	31.0	2276	32	1983	293	12.9
1975	6637	4871	1766	26.6	4338	65	2910	1428	32.9	2299	35	1961	338	14.7
1976	6466	4776	1690	26.1	3863	60	2550	1313	34.0	2603	40	2226	377	14.5
1977	6496	4730	1766	27.2	3698	57	2398	1300	35.2	2798	43	2332	466	16.7
1978	6421	4704	1717	26.7	3383	53	2233	1150	34.0	3038	47	2471	567	18.7
1979	6101	4469	1632	26.7	3046	50	1989	1057	34.7	3055	50	2480	575	18.8
70-79	67,465	50097	17,368	25.7	44,259	66	30,256	14,003	31.6	23,206	34	19,841	3,365	14.5
1980	6515	4715	1800	27.6	2868	44	1832	1036	36.1	3647	56	2883	764	20.9
1981	6785	4939	1846	27.2	2567	38	1692	875	34.1	4218	62	3247	971	23.0
1982	7662	5446	2216	28.9	2727	36	1821	906	33.2	4935	64	3625	1310	26.5
1983	8158	5671	2487	30.5	2837	35	1858	979	34.5	5321	65	3813	1508	28.3
1984	8931	6170	2761	30.9	2741	31	1791	950	34.7	6190	69	4379	1811	29.3
1985	9983	6938	3045	30.5	2882	29	1874	1008	35.0	7101	71	5064	2037	28.7
1986	11229	7705	3524	31.4	3159	28	2047	1112	35.2	8070	72	5658	2412	29.9
1987	11812	8019	3793	32.1	3321	28	2024	1297	39.1	8491	72	5995	2496	29.4
80-87	71,075	49,603	21,472	30.2	23,102	268	14,939	8,163	35.3	47,973	532	34,664	13,309	27.7
TOTAL	189,627	140255	49,372	26.0	116,055	61	83,509	32,546	28.0	73,572	39	56,746	16,826	22.9

FIELD: Mathematical and Computer Sciences

SOURCE: Earned Degrees Conferred, 1971-1987, National Center for Education Statistics

TABLE 6-34 (continued

BACHELORS DEGREES IN THE MATHEMATICAL AND COMPUTER SCIENCES BY SUBFIELD AND SEX (1950 - 1987)

						Mathematical/Computer Sciences Fields									
						Mathematics					Computer & Information Sciences				
Year	Total Math/CS	Men	%M	Women	%W	No.	%Math	Men	Women	%W	No.	%CS	Men	Women	%W
1950	6392	4946	77	1446	22.6	6392	100	4946	1446	22.6					
1951	5753	4311	75	1442	25.1	5753	100	4311	1442	25.1					
1952	4721	3389	72	1332	28.2	4721	100	3389	1332	28.2					
1953	4396	3122	71	1274	29.0	4396	100	3122	1274	29.0					
1954	4090	2722	67	1368	33.4	4090	100	2722	1368	33.4					
1955	4034	2724	68	1310	32.5	4034	100	2724	1310	32.5					
1956	4660	3137	67	1523	32.7	4660	100	3137	1523	32.7					
1957	5546	3826	69	1720	31.0	5546	100	3826	1720	31.0					
1958	6924	4953	72	1971	28.5	6924	100	4953	1971	28.5					
1959	9019	6504	72	2515	27.9	9019	100	6504	2515	27.9					
50-59	55,535	39,634	71	15,901	28.6	55,535	100	39,634	15,901	28.6					
1960	11437	8312	73	3125	27.3	11437	100	8312	3125	27.3					
1961	13127	9483	72	3644	27.8	13127	100	9483	3644	27.8					
1962	14610	10355	71	4255	29.1	14610	100	10355	4255	29.1					
1963	16121	11163	69	4958	30.8	16121	100	11163	4958	30.8					
1964	18677	12682	68	5995	32.1	18677	100	12682	5995	32.1					
1965	19668	13215	67	6453	32.8	19581	100	13132	6449	32.9	87	0.4	83	4	4.6
1966	20182	13480	67	6702	33.2	20093	100	13404	6689	33.3	89	0.4	76	13	14.6
1967	21530	14196	66	7334	34.1	21308	99	13998	7310	34.3	222	1.0	198	24	10.8
1968	24084	15243	63	8841	36.7	23625	98	14839	8786	37.2	459	1.9	404	55	12.0
1969	28263	17915	63	10348	36.6	27330	97	17103	10227	37.4	933	3.3	812	121	13.0
60-69	187,699	126,044	67	61,655	32.8	185,909	99	124,471	61,438	33.0	1,790	1.0	1,573	217	12.1
1970	29109	18593	64	10516	36.1	27565	95	17248	10317	37.4	1544	5.3	1345	199	12.9
1971	27306	17488	64	9818	36.0	24918	91	15424	9494	38.1	2388	8.7	2064	324	13.6
1972	27250	17466	64	9784	35.9	23848	88	14525	9323	39.1	3402	12.5	2941	461	13.6
1973	27528	17543	64	9985	36.3	23223	84	13878	9345	40.2	4305	15.6	3665	640	14.9
1974	26570	16851	63	9719	36.6	21813	82	12874	8939	41.0	4757	17.9	3977	780	16.4
1975	23385	14729	63	8656	37.0	18346	78	10646	7700	42.0	5039	21.5	4083	956	19.0
1976	21749	14071	65	7678	35.3	16085	74	9531	6554	40.7	5664	26.0	4540	1124	19.8
1977	20729	13241	64	7488	36.1	14303	69	8354	5949	41.6	6426	31.0	4887	1539	23.9
1978	19925	12815	64	7110	35.7	12701	64	7455	5246	41.3	7224	36.3	5360	1864	25.8
1979	20670	13249	64	7421	35.9	11901	58	6943	4958	41.7	8769	42.4	6306	2463	28.1
70-79	244,221	156,046	64	88,175	36.1	194,703	80	116,878	77,825	40.0	49,518	20.3	39,168	10,350	20.9
1980	22686	14439	64	8247	36.4	11473	51	6625	4848	42.3	11213	49.4	7814	3399	30.3
1981	26199	16544	63	9655	36.9	11078	42	6342	4736	42.8	15121	57.7	10202	4919	32.5
1982	31866	19811	62	12055	37.8	11599	36	6593	5006	43.2	20267	63.6	13218	7049	34.8
1983	36963	22601	61	14362	38.9	12453	34	6995	5458	43.8	24510	66.3	15606	8904	36.3
1984	45383	27612	61	17771	39.2	13211	29	7366	5845	44.2	32172	70.9	20246	11926	37.1
1985	54024	32743	61	21281	39.4	15146	28	8164	6982	46.1	38878	72.0	24579	14299	36.8
1986	58195	35648	61	22547	38.7	16306	28	8725	7581	46.5	41889	72.0	26923	14966	35.7
1987	56153	34763	62	21390	38.1	16489	29	8834	7655	46.4	39664	70.6	25929	13735	34.6
80-87	331,469	204,161	62	127,308	38.4	107,755	277	59,644	48,111	44.6	223,714	523	144,517	79,197	35.4
TOTAL	818,924	525,885	64	293,039	35.8	543,902	66	340,627	203,275	37.4	275,022	33.6	185,258	89,764	32.6

FIELD: Statistics

SOURCE: Earned Degrees Conferred, 1971-1987, National Center for Education Statistics

TABLE 6-36

DEGREES IN STATISTICS BY SEX AND LEVEL OF DEGREE, 1947-48 - 1986-87

YEAR	BACHELORS Both Sexes	BACHELORS Women Only	BACHELORS % Women	MASTERS Both Sexes	MASTERS Women Only	MASTERS % Women	DOCTORATES Both Sexes	DOCTORATES Women Only	DOCTORATES % Women
1955-56 thru 1959-60	344	78	22.7	506	56	11.1	170	6	3.5
1960-61 thru 1969-70	2355	377	16.0	3507	513	14.6	965	71	7.4
1970-71	217	55	25.3	495	99	20.0	185	12	6.5
1971-72	168	47	28.0	416	85	20.4	173	12	6.9
1972-73	198	69	34.8	402	91	22.6	156	17	10.9
1973-74	257	94	36.6	453	108	23.8	147	10	6.8
1974-75	213	68	31.9	449	109	24.3	158	16	10.1
1975-76	258	92	35.7	471	111	23.6	141	16	11.3
1976-77	290	126	43.4	473	130	27.5	142	23	16.2
1977-78	273	107	39.2	507	134	26.4	153	32	20.9
1978-79	214	82	38.3	532	152	28.6	142	30	21.1
1979-80	247	104	42.1	495	133	26.9	115	24	20.9
1980-81	226	95	42.0	467	144	30.8	144	22	15.3
1981-82	258	106	41.1	478	145	30.3	125	25	20.0
1982-83	273	133	48.7	459	166	36.2	128	17	13.3
1983-84	298	131	44.0	471	153	32.5	149	23	15.4
1984-85	371	151	40.7	490	165	33.7	137	25	18.2
1985-86	438	195	44.5	478	180	37.7	146	26	17.8
1986-87	463	197	42.5	577	234	40.6	115	30	26.1
TOTALS	7,361	2,307	31.3	12,126	2,908	24.0	3,591	437	12.2

SOURCE: "1988 Annual AMS-MAA Survey," Notices of the American Mathematical Society, November, 1988

TABLE 6-37

PERCENT WOMEN IN PHD MATHEMATICS FACULTY AND TENURED PHD FACULTY IN PHD-GRANTING DEPARTMENTS BY RANK AND TYPE OF INSTITUTION, SELECTED YEARS, 1982-83 - 1988-89

Doctorate Granting Departments	Doctoral Degree Rank	1982-1983		1984-1985		1985-1986		1986-1987		1987-1988		1988-1989	
		All	Tenured	All	Tenured	All	Tenured	All	Tenured	All	Tenured	All	Tenured
Group I	Instructor	11.7	0.0	12.8	66.7	9.1	0.0	13.1	0.0	14.8	0.0	13.6	0.0
	Ass't. Prof.	8.2	0.0	9.3	0.0	9.5	50.0	10.5	0.0	7.5	0.0	6.7	0.0
	Assoc. Prof.	5.4	5.6	6.0	6.5	6.8	6.7	6.5	6.8	6.5	6.8	7.2	7.6
	Professor	2.7	2.7	3.2	3.2	3.2	3.2	3.2	3.2	2.4	2.4	2.6	2.6
Group II	Instructor	24.3	0.0	14.5	0.0	23.5	0.0	27.0	0.0	29.0	0.0	17.1	0.0
	Ass't. Prof.	11.3	23.5	13.3	21.4	15.3	15.4	14.3	8.3	13.2	10.0	13.9	3.4
	Assoc. Prof.	6.4	5.5	6.3	6.0	5.8	5.9	5.6	5.5	5.8	5.5	6.5	6.3
	Professor	2.4	2.4	2.8	2.9	3.1	3.2	3.6	3.7	3.4	3.3	3.4	3.4
Group III	Instructor	5.3	0.0	28.2	0.0	15.8	4.0	17.0	8.0	27.8	0.0	33.3	0.0
	Ass't. Prof.	10.8	8.7	12.7	17.9	14.3	12.2	15.2	11.4	12.1	10.7	12.2	8.7
	Assoc. Prof.	5.5	5.3	5.9	5.7	6.1	6.6	6.8	7.6	7.2	7.5	9.9	10.0
	Professor	2.2	2.3	2.0	2.0	2.7	2.8	2.9	2.9	3.4	3.5	2.8	2.7
Group IV	Instructor	75.0	100.0	50.0	100.0	71.4	100.0	60.0	100.0	61.5	100.0	9.1	100.0
	Ass't. Prof.	15.2	20.0	17.8	0.0	17.1	0.0	20.4	0.0	22.2	0.0	1.5	0.0
	Assoc. Prof.	8.5	6.7	9.5	8.8	9.6	8.6	9.5	9.5	10.0	8.5	77.9	9.2
	Professor	3.8	3.8	4.4	4.2	4.3	3.9	4.0	3.5	5.5	3.1	97.0	3.1
Group V	Instructor	100.0	0.0	33.3	0.0	16.7	0.0	16.7	0.0	100.0	0.0	100.0	0.0
	Ass't. Prof.	11.5	0.0	0.0	0.0	8.8	0.0	6.3	0.0	5.0	0.0	5.0	0.0
	Assoc. Prof.	5.9	7.7	0.0	0.0	6.7	3.8	4.8	0.0	0.0	0.0	0.0	0.0
	Professor	2.0	2.1	3.7	3.8	3.0	3.0	3.5	3.7	5.8	5.8	5.7	5.7
Canadian Depts.	Instructor	50.0	0.0	0.0	0.0	50.0	0.0	100.0	0.0	50.0	0.0	100.0	0.0
	Ass't. Prof.	18.9	25.0	9.1	0.0	14.8	30.8	14.9	23.1	5.9	0.0	5.6	0.0
	Assoc. Prof.	3.6	3.7	5.8	5.0	5.5	5.1	6.0	5.9	5.6	5.9	6.6	6.7
	Professor	0.7	7.0	2.0	2.0	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3
All PhD Departments	Instructor	17.0	33.3	18.6	42.9	16.1	7.7	18.8	11.5	24.2	28.6	20.3	16.7
	Ass't. Prof.	11.5	16.9	12.3	15.4	13.8	15.5	14.5	10.4	12.6	8.8	12.6	4.9
	Assoc. Prof.	5.8	5.3	6.3	6.0	6.4	6.3	6.5	6.6	6.7	6.6	8.1	7.9
	Professor	2.5	2.6	2.9	2.9	3.1	3.1	3.3	3.2	3.4	3.1	3.3	3.0
All Ranks & Departments		5.8	3.5	6.0	4.0	6.4	4.3	6.8	4.4	6.5	4.3	6.7	4.5

Note: Includes only percentages from reported numbers. Response rates vary widely from group to group. However, relative changes from one year to the next are fairly accurate.

SOURCE: "1988 Annual AMS-MAA Survey," Notices of the American Mathematical Society, November, 1988

TABLE 6-38

PERCENT WOMEN AMONG FACULTY AND TENURED FACULTY IN NON-PHD-GRANTING MATHEMATICS DEPARTMENTS BY RANK AND TYPE OF INSTITUTION, SELECTED YEARS, 1982-83 - 1988-89

Type of Institution	Rank	1982-1983		1984-1985		1985-1986		1986-1987		1987-1988		1989-1989	
		All	Tenured	All	Tenured	All	Tenured	All	Tenured	All	Tenured	All	Tenured
MASTER'S DEGREE Without Doctorate	Instructor	55.9	55.0	60.0	48.4	59.9	42.9	57.4	39.3	60.5	42.3	60.3	44.4
	Ass't. Prof.	25.2	20.8	24.9	24.4	26.8	19.3	26.4	18.6	29.9	23.9	29.0	22.6
	Assoc. Prof.	18.6	18.9	12.4	12.8	12.7	13.0	12.5	11.8	14.4	14.1	15.4	14.4
	Professor	12.5	12.5	7.7	7.7	10.2	10.4	14.3	12.8	97.9	6.5	10.4	8.7
With Doctorate	Instructor	14.8	0.0	16.9	16.7	23.9	20.0	31.3	33.3	26.7	42.9	24.1	42.9
	Ass't. Prof.	18.5	20.3	15.3	7.9	16.2	26.2	18.1	18.6	19.1	18.9	20.0	23.0
	Assoc. Prof.	10.1	10.1	11.7	11.5	12.8	13.3	12.9	13.2	12.3	12.3	13.4	12.6
	Professor	6.9	6.5	6.0	6.1	6.9	6.9	7.3	7.4	6.2	6.0	7.1	6.8
BACHELOR'S DEGREE Without Doctorate	Instructor	52.8	37.5	52.7	16.7	47.1	28.6	42.3	37.5	49.7	23.1	51.7	23.5
	Ass't. Prof.	29.6	29.6	25.8	20.5	31.9	31.9	32.3	33.0	31.1	28.4	33.1	30.0
	Assoc. Prof.	13.3	14.5	12.2	9.7	13.1	12.2	15.4	13.4	20.3	19.7	21.5	20.7
	Professor	9.4	9.8	13.7	14.0	12.5	13.3	19.4	15.6	14.8	17.4	16.4	18.8
With Doctorate	Instructor	10.5	0.0	27.8	0.0	30.8	0.0	25.0	0.0	33.3	0.0	27.8	0.0
	Ass't. Prof.	20.2	9.4	24.9	16.9	25.8	21.3	24.8	20.0	21.4	14.8	22.5	18.8
	Assoc. Prof.	9.0	6.6	11.0	9.6	12.5	11.8	12.3	13.7	12.9	13.4	12.1	12.1
	Professor	9.8	9.7	8.5	8.6	10.9	10.0	10.5	9.6	10.4	10.1	11.1	11.0
ALL INSTITUTIONS**													
Without Doctorate		34.9	20.8	37.8	18.5	37.9	18.6	36.2	19.6	20.9	12.5	20.6	13.1
With Doctorate		8.2	5.7	8.6	6.1	9.2	6.6	9.5	6.8	6.5	4.3	6.7	4.5
TOTAL		12.9	7.6	13.6	7.3	14.5	8.0	14.1	8.2	13.8	8.0	13.8	8.4

*Number of institutions reporting varies markedly from year to year. Thus numbers reported are not as representative of trends as are the percentages recorded in this and the preceeding table.

** Includes information on doctorate granting institutions shown in preceding table

Note: The number of institutions reporting varies markedly from year to year. Thus, numbers reported are not as representative of trends as are the percentages recorded in this and the preceeding table.

**Includes information on doctorate granting institutions shown in the preceeding table.

FIELD: Mathematical Sciences

TABLE 6-39

SOURCE: "30th Annual AMS Survey 1986, First Report," and "1987 AMS-MAA Survey," The American Mathematical Society Notices, November 1986 and November 1987

U.S. CITIZEN DOCTORATES IN THE MATHEMATICAL SCIENCES BY SEX, 1972-73 - 1985-86

YEAR	ADJUSTED TOTAL*	U. S. CITIZENS TOTAL	%	MEN	WOMEN	% W
1972-73	986	774	78.5	696	78	10.1
1973-74	938	677	72.2	618	59	8.7
1974-75	999	741	74.2	658	83	11.2
1975-76	965	722	74.	636	86	11.9
1976-77	901	689	76.5	602	87	12.6
1977-78	868	634	73.0	545	89	14.0
1978-79	806	596	73.9	503	93	15.6
1979-80	791	578	73.1	491	87	15.1
1980-81	839	567	67.6	465	102	18.0
1981-82	798	519	65.0	431	88	17.0
1982-83†	744	455	61.2	366	89	19.6
1983-84†	738	433	58.7	346	87	20.1
1984-85†	726	396	54.5	315	81	20.4
1985-86†	755	386	51.1	304	82	21.2
1986-87†	720	362	50.3	289	73	20.2

*Includes only those for whom citizenship is known.

†Does not include Computer Science degrees.

SOURCE: "Vital Statistics in the Mathematical Sciences...: Fall 1988," Notices of the American Mathematical Society, May/June 1989

TABLE 6-40

EMPLOYMENT OF NEW PHDS IN MATH SCIENCES, 1987-88, AND PERCENT WOMEN IN CURRENT PHD FACULTY

Type of Employment	New PhDs Total	%Total	Women	%Wom	%Women Faculty
Academic U.S.	460	53.7	81	17.6	
University	227	26.5	35	15.4	
Group I	87	10.2	11	12.6	4.4
Group II	42	4.9	11	26.2	6.5
Group III	53	6.2	4	7.5	7.7
Group IV	34	4.0	9	26.5	10.8
Group V	11	1.3	0	0.0	3.4
Masters Inst	77	9.0	14	18.2	12.7
Bach. Inst.	71	8.3	14	19.7	16.3
2yr Coll or HS	7	0.8	5	71.4	
Other Academic	78	9.1	13	16.7	
Other U.S.	128	15.0	27	21.1	
Research Inst	18	2.1	3	16.7	
Government	15	1.8	3	20.0	
Bus/Ind	95	11.1	21	22.1	
Foreign	223	26.1	37	16.6	
Canada	46	5.4	8	17.4	
Other Foreign	177	20.7	29	16.4	
Not Seeking	6	0.7	2	33.3	
Not Yet Empl.	11	1.3	1	9.1	
Unknown	28	3.3	5	17.9	
TOTAL	856	100.0	153	17.9	

SOURCE: Office of Personnel Management, unpublished tabulations

TABLE 6-41

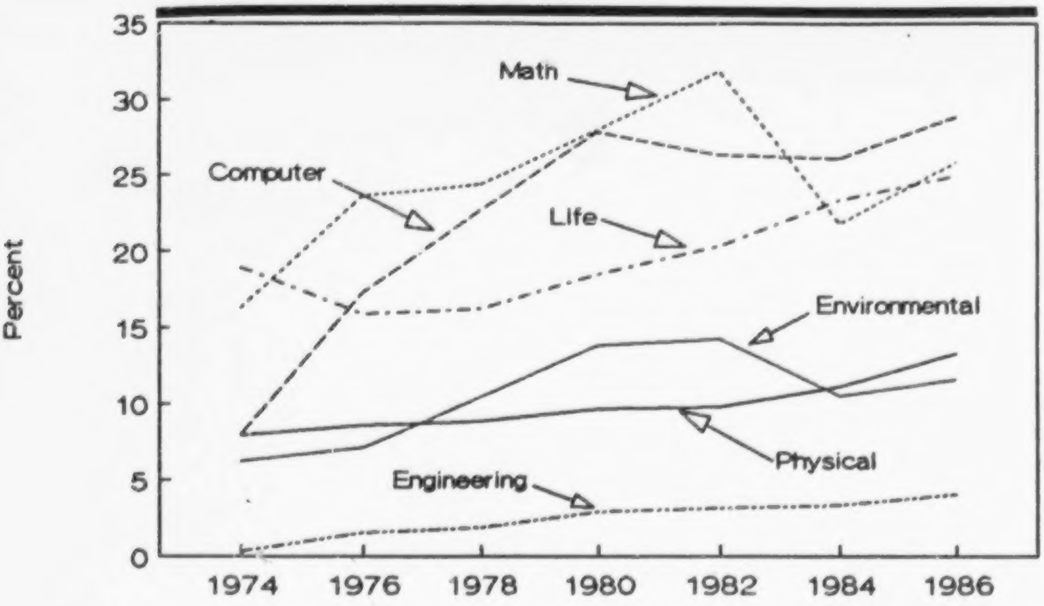
NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN ACCOUNTING, MATHEMATICS, STATISTICS & COMPUTER SPECIALTIES BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, SEPT 30, 1988

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		ASIAN		AM. INDIAN		WHITE	
	TOTAL	WOMEN	% W	TOTAL	%	WOMEN	% W	No.	% B	No.	% H	No.	% A	No.	% I	No.	% W
Accounting	11308	4029	35.6	2739	24.2	1418	51.8	1813	16.0	384	3.4	435	3.8	107	0.9	8569	75.8
Auditing	14272	3709	26.0	2541	17.8	1031	40.6	1459	10.2	392	2.7	636	4.5	54	0.4	11731	82.2
Actuary	152	33	21.7	17	11.2	5	29.4	6	3.9	4	2.6	7	4.6	0	0.0	135	88.8
Operations Research	3975	727	18.3	423	10.6	116	27.4	191	4.8	94	2.4	119	3.0	19	0.5	3552	89.4
Mathematics	2708	730	27.0	365	13.5	134	36.7	189	7.0	73	2.7	94	3.5	9	0.3	2343	86.5
Mathematical Statistician	1146	334	29.1	212	18.5	80	37.7	73	6.4	21	1.8	115	10.0	3	0.3	934	81.5
Statistician	2840	1004	35.4	487	17.1	269	55.2	325	11.4	66	2.3	89	3.1	7	0.2	2353	82.9
Cryptographer	6	3	50.0	1	16.7	1	100.0	1	16.7	0	0.0	0	0.0	0	0.0	5	83.3
Computer Science	2539 0	777	30.6	338	13.3	150	44.4	141	5.6	40	1.6	150	5.9	7	0.3	2201	86.7
Computer Operation	9599	5029	52.4	3755	39.1	2169	57.8	2815	29.3	512	5.3	114	1.2	314	3.3	5844	60.9
TOTALS	38946	11346	29.1	7123	18.3	3204	45.0	4198	10.8	1074	2.8	1645	4.2	206	0.5	31823	81.7

SOURCE: National Science Foundation Estimates

CHART 6-2

WOMEN AS PERCENT OF EMPLOYED NATURAL SCIENTISTS & ENGINEERS

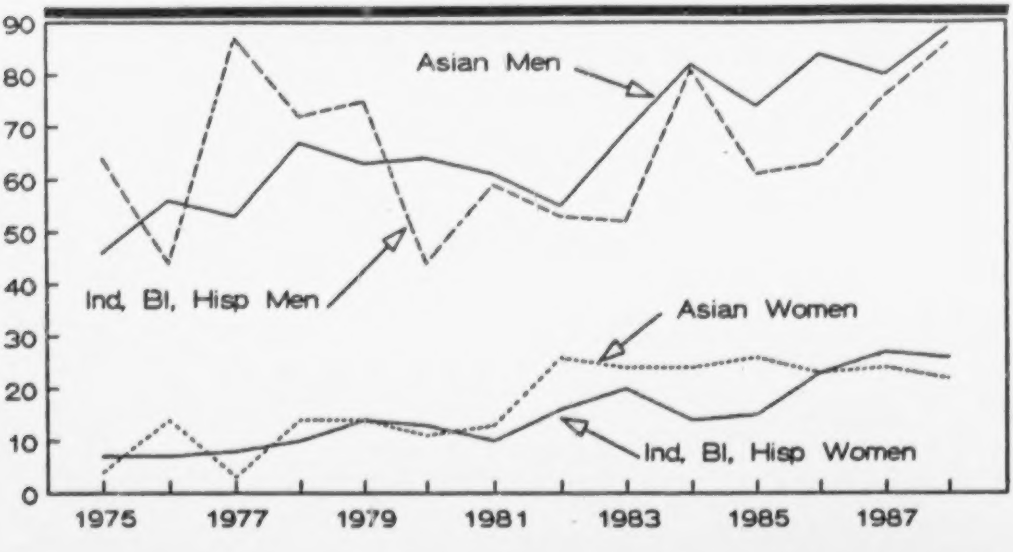


Graph by CPST (114, D6-41, EMWONATS.TC)

URCE: Doctorate Recipients from United States Universities, Summary Report: 1975-88

CHART 6-3

U.S. MINORITY PhD AWARDS IN PHYSICAL SCIENCES, 1975 - 1988



Graph by CPST (192, 2-5 MINPHSCI.TC)

SOURCE: Science and Engineering Doctorates : 1960-85, National Science Foundation, 1987; and Doctorate Recipients from United States Universities, Summary Reports, 1972-88, National Research Council

TABLE 7-1

PHD AWARDS IN ENGINEERING BY SUBFIELD AND SEX, 1960-88

	Year of Doctorate														
	1960-69			1970-79			1980-86			1987			1988		
Fields	Total	Women	%Wom	Total	Women	%Wom	Total	Women	%Wom	Total	Women	%Wom	Total	Women	%Wom
TOTAL	19070	77	0.4	30338	426	1.4	23053	1209	5.2	3716	242	6.5	4190	286	6.8
Aerospace/Aeronaut/Astro(1)	948	6	0.6	1460	16	1.1	855	17	2.0	142	10	7.0	150	9	6.0
Agricultural	283	0	0.0	546	2	0.4	484	14	2.9	74	3	4.1	70	3	4.3
Bioengineering & Biomed(2)	37	0	0.0	698	13	1.9	540	60	11.1	75	15	20.0	114	18	15.8
Ceramic	296	3	1.0	297	8	2.7	180	12	6.7	42	4	9.5	30	3	10.0
Chemical	2969	17	0.6	3555	52	1.5	2953	212	7.2	528	56	10.6	625	60	9.6
Civil	1924	7	0.4	3078	34	1.1	2641	110	4.2	441	17	3.9	489	25	5.1
Communications(3)							119	4	3.4	26		0.0	24	3	12.5
Computer(4)				498	32	6.4	533	38	7.1	61	2	3.3	99	7	7.1
Electrical, Electronics(5)							2990	108	3.6	692	30	4.3	885	38	4.3
Electrical(5)	3941	11	0.3	5777	60	1.0	1359	44	3.2						
Electronics(5)	937	3	0.3	966	10	1.0	230	3	1.3						
Engineering Mechanics	1501	7	0.5	1557	15	1.0	701	32	4.6	113	3	2.7	106	3	2.8
Engineering Physics(6)	780	2	0.3	267	5	1.9	107	4	3.7	13	1	7.7	9		0.0
Engineering Science(3)							150	4	2.7	26		0.0	32	3	9.4
Environmental Health Eng(7)	365	2	0.5	667	13	1.9	405	27	6.7	36	1	2.8	43	5	11.6
Industrial	454	4	0.9	959	21	2.2	677	67	9.9	120	13	10.8	127	19	15.0
Materials Science	22	0	0.0	1047	30	2.9	1291	132	10.2	238	36	15.1	252	25	9.9
Mechanical	2291	2	0.1	3409	25	0.7	2846	91	3.2	544	14	2.6	611	26	4.3
Metallurgical(8)	1442	7	0.5	1393	13	0.9	741	48	6.5	112	5	4.5	92	5	5.4
Mining & Mineral(9)	10	0	0.0	81	0	0.0	111	4	3.6	27	1	3.7	17	1	5.9
Naval Arch, Marine Eng(3)							34	0	0.0	7		0.0	9		0.0
Nuclear (6)	120	0	0.0	1125	18	1.6	875	37	4.2	87	2	2.3	104	4	3.8
Ocean (3)							87	0	0.0	24	1	4.2	21		0.0
Operations Research				693	20	2.9	457	49	10.7	51	7	13.7	44	4	9.1
Petroleum (10)				117	3	2.6	184	3	1.6	23		0.0	33	2	6.1
Polymer (3)							168	22	13.1	34	4	11.8	28	3	10.7
Systems Eng (11)				357	7	2.0	434	23	5.3	46	3	6.5	44	7	15.9
Engineering, General	124	1	0.8	384	4	1.0	273	13	4.8	55	8	14.5	49	2	4.1
Engineering, Other	626	5	0.8	1407	25	1.8	628	31	4.9	79	6	7.6	83	11	13.3

(1) Originally "Aeronautical engineering", "Astronautical" added in 1966 and "Aerospace" added in 1983. "Biomedical introduced in 1969. "Bioengineering" added in 1983. (3) Introduced in 1983. (4) Introduced in 1975. (5) These two subfields were merged in 1983. (6) In 1961 "Nuclear engineering" was dropped and previous cases added to "Engineering physics." In 1969 "Nuclear engineering: was reinstated. (7) Called "Sanitary and environmental: before 1983. (8) Originally "Metallurgy and metallurgical engineering", the term :Physical" was introduced in 1967 and changed to "metallurgical: in 1983. (9) "Mining engineering" dropped in 1961, restored in 1969, and renamed "Mining and mineral" in 1983. (10) "Fuel technology and petroleum engineering" introduced in 1973, renamed "Petroleum" in 1983. (11) Introduced as "Systems design and and systems science" in 1975, renamed "Systems" in 1983.

SOURCE: Science and Engineering Doctorates : 1960-85, National Science Foundation, 1987; and Doctorate Recipients from United States Universities, Summary Reports, 1972-1988, National Research Council

TABLE 7-2

ENGINEERING PHD AWARDS BY CITIZENSHIP AND VISA TYPE, 1960-1988

		U.S.		FOREIGN						
YEAR	TOTAL	No.	%	Total No.	%	Immigrant No.	%	Non-Immigrant No.	%	Citizenship Unknown
1960	794	607	76.4	183	23.0	54	6.8	129	16.2	4
1961	940	732	77.9	202	21.5	48	5.1	154	16.4	6
1962	1,216	949	78.0	259	21.3	41	3.4	218	17.9	8
1963	1,357	1,062	78.3	280	20.6	65	4.8	215	15.8	15
1964	1,664	1,313	78.9	331	19.9	84	5.0	247	14.8	20
1965	2,074	1,603	77.3	430	20.7	111	5.4	319	15.4	41
1966	2,301	1,718	74.7	501	21.8	116	5.0	385	16.7	82
1967	2,604	1,957	75.2	607	23.3	198	7.6	409	15.7	40
1978	2,848	2,134	74.9	680	23.9	244	8.6	436	15.3	34
1969	3,251	2,416	74.3	780	24.0	320	9.8	460	14.1	55
1970	3,433	2,542	74.0	872	25.4	401	11.7	471	13.7	19
1971	3,500	2,436	69.6	1,032	29.5	513	14.7	519	14.8	32
1972	3,476	2,307	66.4	1,137	32.7	619	17.8	518	14.9	32
1973	3,339	2,126	63.7	1,170	35.0	552	16.5	618	18.5	43
1874	3,121	1,735	55.6	1,208	38.7	507	16.2	701	22.5	178
1975	2,961	1,685	56.9	1,223	41.3	413	13.9	810	27.4	53
1976	2,791	1,532	54.9	1,183	42.4	384	13.8	799	28.6	76
1977	2,641	1,468	55.6	1,098	41.6	325	12.3	773	29.3	75
1978	2,423	1,259	52.0	1,092	45.1	325	13.4	767	31.7	72
1979	2,494	1,294	51.9	1,138	45.6	322	12.9	816	32.7	62
1980	2,479	1,254	50.6	1,148	46.3	298	12.0	850	34.3	77
1981	2,528	1,168	46.2	1,241	49.1	298	11.8	943	37.3	119
1982	2,644	1,165	44.1	1,324	50.1	296	11.2	1,028	38.9	155
1983	2,780	1,154	41.5	1,488	53.5	319	11.5	1,169	42.1	138
1984	2,915	1,239	42.5	1,542	52.9	274	9.4	1,268	43.5	134
1985	3,165	1,278	40.4	1,729	54.6	316	10.0	1,413	44.6	158
1986	3,376	1,377	40.8	1,715	50.8	344	10.2	1,371	40.6	284
1987	3,716	1,553	41.8	1,888	50.8	356	9.6	1,532	41.2	275
1988	4,190	1,778	42.4	2,089	49.9	366	8.7	1,723	41.1	323
TOTAL	77,021	44,841	58.2	29,570	38.4	8,509	11.0	21,061	27.3	2,610

SOURCE: Series of Earned Degrees Conferred, Department of Education Center for Education Statistics, adapted to National Science Foundation Field Definitions

TABLE 7-3

PhD DEGREES IN ENGINEERING BY SEX AND SUBFIELD (1950 – 1987)

	Total			Engineering Fields																											
				Aeronautical				Chemical				Civil				Electrical				Industrial				Mechanical				Other			
Year	Eng	Wom	W	No.	E	om	%W	No.	%E	Wom	%W	No.	%E	Wom	%W	No.	%E	Wom	%W	No.	E	Wom	%W	No.	%E	Wom	%W	No.	%E	Wom	%W
1950	417	1	0.2	23	6	0	0.0	173	41	1	0.6	28	7	0	0.0	80	19	0	0.0					46	11	0	0.0	67	16	0	0.0
1951	520	1	0.2	26	5	1	3.8	171	33	0	0.0	52	10	0	0.0	113	22	0	0.0					67	13	0	0.0	91	18	0	0.0
1952	529	3	0.6	25	5	0	0.0	168	32	0	0.0	45	9	0	0.0	120	23	3	2.5					72	14	0	0.0	99	19	0	0.0
1953	518	1	0.2	32	6	0	0.0	147	28	0	0.0	40	8	0	0.0	132	25	1	0.8					84	16	0	0.0	83	16	0	0.0
1954	594	1	0.2	43	7	0	0.0	133	22	0	0.0	43	7	0	0.0	111	19	0	0.0	6	1	1	16.7	72	12	0	0.0	186	31	0	0.0
1955	590	0	0.0	23	4	0	0.0	130	23	0	0.0	29	5	0	0.0	141	24	0	0.0	9	2	0	0.0	79	13	0	0.0	179	30	0	0.0
1956	610	0	0.0	36	6	0	0.0	136	22	0	0.0	59	10	0	0.0	136	22	0	0.0	10	2	0	0.0	61	10	0	0.0	172	28	0	0.0
1957	596	1	0.2	32	5	0	0.0	146	24	0	0.0	39	7	0	0.0	130	22	0	0.0	17	3	0	0.0	67	11	0	0.0	165	28	1	0.6
1958	647	4	0.6	26	4	1	3.8	127	20	1	0.8	69	11	0	0.0	144	22	1	0.7	9	1	0	0.0	78	12	0	0.0	198	30	1	0.5
1959	714	1	0.1	24	3	0	0.0	143	20	0	0.0	70	10	0	0.0	189	26	0	0.0	12	2	0	0.0	83	12	1	0.0	193	27	0	0.0
50-59	5,744	13	0.2	290	5	2	0.7	1,483	26	2	0.1	474	8	0	0.0	1,296	23	5	0.4	63	1	1	1.6	707	12	1	0.0	1,431	25	2	0.1
1960	786	3	0.4	23	3	1	4.3	170	22	0	0.0	74	9	1	1.4	203	26	1	0.5	13	2	0	0.0	107	14	0	0.0	196	25	0	0.0
1961	943	6	0.6	42	4	1	2.4	171	18	0	0.0	117	12	1	0.9	250	27	1	0.4	19	2	0	0.0	106	11	0	0.0	238	25	3	1.3
1962	1,207	4	0.3	54	4	0	0.0	225	19	1	0.4	145	12	0	0.0	295	24	1	0.3	26	2	1	3.8	159	13	0	0.0	303	25	1	0.3
1963	1,378	11	0.8	70	5	3	4.3	238	17	2	0.8	142	10	2	1.4	386	28	2	0.5	23	2	0	0.0	164	12	0	0.0	355	26	2	0.6
1964	1,693	7	0.4	72	4	1	1.4	262	15	1	0.4	218	13	1	0.5	460	27	2	0.4	32	2	0	0.0	200	12	0	0.0	449	27	2	0.4
1965	2,124	10	0.5	91	4	0	0.0	364	17	2	0.5	252	12	2	0.8	511	24	2	0.4	61	3	1	1.6	265	12	0	0.0	580	27	3	0.5
1966	2,304	9	0.4	105	5	0	0.0	354	15	3	0.8	283	12	1	0.4	569	25	2	0.4	45	2	0	0.0	289	13	0	0.0	659	29	3	0.5
1967	2,614	11	0.4	142	5	0	0.0	305	12	2	0.7	298	11	1	0.3	668	26	0	0.0	64	2	2	3.1	354	14	1	0.0	785	30	5	0.6
1968	2,932	12	0.4	162	6	1	0.6	367	13	3	0.8	376	13	0	0.0	723	25	0	0.0	79	3	2	2.5	395	13	1	0.0	830	28	5	0.6
1969	3,377	12	0.4	207	6	0	0.0	409	12	3	0.7	381	11	0	0.0	862	26	4	0.5	115	3	0	0.0	425	13	0	0.2	978	29	5	0.5
60-69	19,358	85	0.4	968	5	7	0.7	2,865	15	17	0.6	2,284	12	9	0.4	4,927	25	15	0.3	477	2	6	1.3	2,464	13	2	0.0	5,373	28	29	0.5
1970	3,681	24	0.7	211	6	2	0.9	438	12	4	0.9	411	11	2	0.5	882	24	3	0.3	126	3	3	2.4	435	12	0	0.0	1,178	32	10	0.8
1971	3,654	23	0.6	217	6	3	1.4	406	11	2	0.5	446	12	3	0.7	879	24	3	0.3	139	4	3	2.2	438	12	0	0.0	1,129	31	9	0.8
1972	3,704	26	0.7	197	5	0	0.0	394	11	1	0.3	415	11	2	0.5	824	22	3	0.4	168	5	0	0.0	411	11	1	0.0	1,295	35	18	1.4
1973	3,580	64	1.8	171	5	1	0.6	397	11	2	0.5	397	11	9	2.3	791	22	9	1.1	130	4	3	2.3	370	10	3	0.0	1,304	37	37	2.8
1974	3,336	55	1.6	173	5	3	1.7	400	12	10	2.5	368	11	4	1.1	705	21	8	1.1	146	4	2	1.4	385	12	6	0.0	1,159	35	22	1.9
1975	3,151	67	2.1	163	5	2	1.2	346	11	4	1.2	356	11	9	2.5	701	22	11	1.6	119	4	5	4.2	340	11	4	0.0	1,126	36	32	2.8
1976	2,835	69	2.4	139	5	2	1.4	308	11	9	2.9	370	13	9	2.4	649	23	14	2.2	121	4	3	2.5	305	11	2	0.0	943	33	30	3.2
1977	2,599	74	2.8	119	5	4	3.4	291	11	8	2.7	309	12	6	1.9	566	22	18	3.2	104	4	5	4.8	283	11	3	0.4	927	36	30	3.2
1978	2,442	57	2.3	115	5	2	1.7	259	11	7	2.7	277	11	6	2.2	503	21	13	2.6	118	5	5	4.2	279	11	6	0.4	891	36	18	2.0
1979	2,517	83	3.3	95	4	0	0.0	304	12	8	2.6	253	10	4	1.6	586	23	14	2.4	149	6	14	9.4	271	11	3	0.0	859	34	40	4.7
70-79	31,479	541	1.7	1,600	5	19	1.2	3,543	11	55	1.6	3,602	11	54	1.5	7,086	23	96	1.4	1,320	4	43	3.3	3,517	11	26	0.0	10,811	34	246	2.3
1980	2,519	96	3.8	99	4	1	1.0	284	11	15	5.3	270	11	6	2.2	525	21	14	2.7	116	5	7	6.0	281	11	4	0.0	944	37	49	5.2
1981	2,551	104	4.1	109	4	1	0.9	300	12	13	4.3	325	13	9	2.8	535	21	20	3.7	112	4	9	8.0	276	11	7	0.0	894	35	45	5.0
1982	2,621	138	5.3	96	4	1	1.0	311	12	19	6.1	329	13	14	4.3	526	20	21	4.0	116	4	13	11.2	333	13	13	0.3	910	35	57	6.3
1983	2,822	125	4.4	90	3	2	2.2	319	11	21	6.6	340	12	13	3.8	550	19	9	1.6	118	4	11	9.3	299	11	8	1.0	1,106	39	61	5.5
1984	2,979	165	5.5	106	4	2	1.9	330	11	19	5.8	369	12	24	6.5	585	20	14	2.4	119	4	17	14.3	319	11	7	1.0	1,151	39	82	7.1
1985	3,221	207	6.4	110	3	4	3.6	418	13	39	9.3	377	12	21	5.6	660	20	28	4.2	139	4	14	10.1	409	13	24	1.5	1,106	34	77	6.9
1986	3,400	228	6.7	112	3	2	1.8	446	13	50	11.2	395	12	29	7.3	722	21	39	5.4	130	4	19	14.6	426	13	11	0.7	1,169	34	78	6.7
1987	3,809	261	6.9	128	3	10	7.8	497	13	58	11.7	451	12	17	3.8	726	19	35	4.8	165	4	20	12.1	528	14	17	0.0	1,314	34	104	7.9
80-87	23,922	1,324	5.5	850	4	23	2.7	2,905	12	234	8.1	2,856	12	133	4.7	4,829	20	180	3.7	1,015	4	110	10.8	2,871	12	91	0.0	8,596	36	553	6.4
TOTAL	80,503	1963	2.4	3,708	5	51	1.4	10,796	13	306	2.9	9,216	11	196	2.1	18,138	23	296	1.6	2,875	4	160	5.6	9,559	12	122	1.3	26,211	33	830	3.2

SOURCE: Series of Earned Degrees Conferred, Department of Education Center for Education Statistics, adapted to National Science Foundation Field Definitions

TABLE 7-3 (continued)

MASTERS DEGREES IN ENGINEERING BY SUBFIELD AND SEX (1950 - 1987)

				Engineering Fields																											
	Total			Aero/Astro				Chemical				Civil				Electrical				Industrial				Mechanical				Other			
Year	Eng	Women	%W	No.	E	Wom	%W	No.	E	Wom	%W	No.	%E	Wom	%W	No.	%E	Wom	%W	No.	%E	Wom	%W	No.	%E	Wom	%W	No.	%E	Wom	%W
1950	4496	15	0.3	373	8	1	0.3	699	16	1	0.1	689	15	3	0.4	1057	24	2	0.2					784	17	3	0.4	894	20	5	0.6
1951	4825	10	0.2	332	7	1	0.3	740	15	2	0.3	630	13	1	0.2	1114	23	0	0.0					913	19	3	0.3	1096	23	3	0.3
1952	4091	18	0.4	231	6	0	0.0	587	14	5	0.9	583	14	1	0.2	1006	26	3	0.3					660	16	4	0.6	1022	25	5	0.5
1953	3566	13	0.4	210	6	1	0.5	431	12	2	0.5	566	16	1	0.2	880	25	1	0.1					667	19	0	0.0	812	23	8	1.0
1954	4204	15	0.4	219	5	1	0.5	448	11	2	0.4	565	13	3	0.5	975	23	1	0.1	376	9	2	0.5	723	17	0	0.0	896	21	6	0.7
1955	4484	13	0.3	204	5	2	1.0	470	10	1	0.2	693	15	3	0.4	1074	24	2	0.2	373	8	1	0.3	789	17	1	0.1	911	20	3	0.3
1956	4724	19	0.4	216	5	3	1.4	545	12	3	0.6	822	17	1	0.1	1161	25	3	0.3	354	7	0	0.0	765	16	2	0.3	861	18	7	0.8
1957	5233	16	0.3	256	5	2	0.8	402	8	1	0.2	850	16	4	0.5	1312	26	2	0.2	395	8	1	0.3	812	16	3	0.4	1206	23	3	0.2
1958	5788	20	0.3	301	5	1	0.3	561	10	4	0.7	810	14	1	0.1	1570	27	5	0.3	486	8	1	0.2	952	16	0	0.0	1106	19	8	0.7
1959	6753	24	0.4	331	5	1	0.3	596	9	3	0.5	926	14	5	0.5	1846	27	6	0.3	576	9	0	0.0	1081	16	1	0.1	1395	21	8	0.6
50-59	48164	163	0.3	2873	6	13	0.5	5479	11	24	0.4	7134	15	23	0.3	12000	25	25	0.2	2561	5	5	0.2	8116	17	17	0.2	10201	21	56	0.5
1960	7159	26	0.4	342	5	0	0.0	617	9	6	1.0	1052	15	1	0.1	1993	28	4	0.2	468	7	1	0.2	1179	16	4	0.3	1508	21	10	0.7
1961	8176	28	0.3	437	5	3	0.7	650	8	2	0.3	1247	15	1	0.1	2414	30	4	0.2	456	6	0	0.0	1401	17	5	0.4	1571	19	13	0.8
1962	8909	40	0.4	469	5	3	0.6	676	8	7	1.0	1266	14	9	0.7	2701	30	10	0.4	508	6	0	0.0	1531	17	2	0.1	1736	20	9	0.5
1963	9635	32	0.3	575	6	4	0.7	711	7	2	0.3	1410	15	4	0.3	2816	29	9	0.3	603	6	0	0.0	1664	17	0	0.0	1856	19	13	0.7
1964	10627	34	0.3	656	6	3	0.5	762	7	5	0.7	1567	14	6	0.4	3163	29	6	0.2	808	7	1	0.1	1866	17	3	0.2	1963	18	10	0.5
1965	12056	44	0.4	699	6	6	0.9	806	7	3	0.4	1686	14	5	0.3	3505	29	7	0.2	1013	8	3	0.3	2036	17	5	0.2	2311	19	15	0.6
1966	13678	76	0.6	796	6	6	0.8	994	7	7	0.7	2007	15	7	0.3	3872	28	22	0.6	1200	9	6	0.5	2154	16	7	0.3	2553	19	21	0.8
1967	13885	78	0.6	802	6	2	0.2	949	7	7	0.7	2019	15	18	0.9	3853	28	11	0.3	1341	10	10	0.7	2176	16	7	0.3	2645	19	23	0.9
1968	15188	99	0.7	841	6	6	0.7	1156	8	14	1.2	2137	14	14	0.7	4226	28	22	0.5	1512	10	9	0.6	2136	14	6	0.3	3180	21	28	0.9
1969	15243	113	0.7	835	5	7	0.8	1136	7	9	0.8	2201	14	12	0.5	4033	26	22	0.5	1453	10	8	0.6	2296	15	4	0.2	3287	22	51	1.6
60-69	114758	570	0.5	6456	6	40	0.6	8457	7	62	0.7	16612	14	77	0.5	32676	28	117	0.4	9364	8	38	0.4	18461	16	43	0.2	22732	20	193	0.8
1970	15597	172	1.1	749	5	3	0.4	1045	7	17	1.6	2242	14	19	0.8	4136	27	29	0.7	1763	11	17	1.0	2296	15	12	0.5	3362	22	75	2.2
1971	16347	187	1.1	717	4	6	0.8	1100	7	26	2.4	2431	15	28	1.2	4262	26	30	0.7	1921	12	23	1.2	2236	14	5	0.2	3658	22	69	1.9
1972	16602	281	1.7	687	4	7	1.0	1154	7	28	2.4	2487	15	38	1.5	4209	25	52	1.2	1731	10	25	1.4	2263	14	18	0.8	4251	25	113	2.7
1973	16756	288	1.7	563	3	2	0.4	1051	6	21	2.0	2629	16	36	1.4	3890	23	48	1.3	1585	10	29	1.8	2142	13	19	0.9	4879	29	130	2.7
1974	15393	362	2.4	557	4	9	1.6	1045	7	31	3.0	2653	17	49	1.8	3490	23	55	1.6	1734	11	45	2.6	1844	12	21	1.1	4061	26	152	3.7
1975	15434	398	2.6	477	3	7	1.5	990	6	25	2.5	2771	18	74	2.7	3471	22	58	1.7	1687	11	56	3.3	1880	12	15	0.8	4178	27	161	3.9
1976	16170	589	3.6	479	3	10	2.1	1031	6	29	2.8	3000	19	99	3.3	3774	23	104	2.8	1751	11	81	4.6	1907	12	27	1.4	4228	26	239	5.7
1977	16889	733	4.3	385	2	8	2.1	1086	6	65	6.0	2989	18	129	4.3	3788	22	134	3.5	1609	10	75	4.7	1965	12	49	2.5	5099	30	273	5.4
1978	17015	871	5.1	411	2	11	2.7	1237	7	87	7.0	2691	16	132	4.9	3742	22	143	3.8	1722	10	138	8.0	1943	11	57	2.9	5289	31	303	5.8
1979	16193	990	6.1	372	2	17	4.6	1149	7	114	9.9	2656	16	143	5.4	3596	22	143	4.0	1502	9	128	8.5	1878	12	67	3.6	6041	31	375	7.5
70-79	162596	4869	3.0	5397	3	80	1.5	10868	7	443	4.1	26528	16	749	2.8	36386	24	797	2.1	17016	10	617	3.6	20346	13	290	1.4	44026	27	1890	4.3
1980	16846	1190	7.1	382	2	9	2.4	1271	8	133	10.5	2683	16	197	7.3	3842	23	184	4.8	1313	8	133	10.1	2060	12	96	4.8	5295	31	436	8.2
1981	16386	1323	8.1	408	2	20	4.9	1267	8	163	12.9	2871	18	207	7.2	3901	24	221	5.7	1631	10	166	10.2	2291	14	116	5.1	3997	24	430	10.8
1982	17526	1573	9.0	521	3	39	7.5	1285	7	181	14.1	2996	17	270	9.0	4462	25	288	6.5	1656	9	210	12.7	2399	14	139	5.8	4208	24	446	10.6
1983	18630	1746	9.3	491	3	37	7.5	1368	7	164	12.0	3074	16	294	9.6	4531	24	290	6.5	1432	8	206	14.4	2511	13	149	5.9	5423	29	603	11.1
1984	20084	2096	10.4	562	3	27	4.8	1514	8	194	12.8	3146	18	326	10.4	5078	25	385	7.6	1557	8	278	17.9	2797	14	184	6.6	5440	27	702	12.9
1985	20926	2242	10.7	606	3	31	5.1	1544	7	278	18.0	3172	15	337	10.6	5153	25	434	8.4	1462	7	227	15.5	3053	15	204	6.7	5937	28	731	12.3
1986	21661	2493	11.5	621	3	43	6.9	1361	6	214	15.7	2926	14	300	10.3	5531	26	556	10.0	1653	8	279	16.9	3075	14	237	7.7	6491	30	864	13.3
1987	22081	2769	12.5	718	3	55	7.7	1184	5	223	18.8	2901	13	379	13.1	6234	26	598	9.6	1726	8	319	18.5	3157	14	227	7.2	6161	28	967	15.7
80-86	154,360	15,432	10.0	4,308	3	261	6.1	10,794	7	1,550	14.4	23,768	15	2,310	9.7	38,735	26	2,960	7.6	12,430	8	1,818	14.6	21,343	14	1,364	6.3	42,962	28	5,179	12.1
TOTA	479,870	21,034	4.4	18,834	4	394	2.1	35,618	7	2,079	5.8	74,062	15	3,159	4.3	121,809	25	3,899	3.2	41,370	9	2,478	6.0	68,296	14	1,704	2.5	119,811	25	7,321	6.1

SOURCE: Series of Earned Degrees Conferred, Department of Education Center for Education Statistics, adapted to National Science Foundation Field Definitions

TABLE 7-3 (continued)

BACHELORS DEGREES IN ENGINEERING BY SUBFIELD & SEX (1950 -1987)

				Engineering Fields																											
				Aero/Astro				Chemical				Civil				Electrical				Industrial				Mechanical				Other			
Year	Total Eng	Women	%W	No.	%E	Wom	%W	No.	%E	Wom	%W	No.	%E	Wom	%W	No.	%E	Wom	%W	No.		Wom	%W	No.	%E	Wom	%W	No.	%E	Wom	%W
1950	52246	175	0.3	1712	3	14	0.8	4506	9	32	0.7	7781	15	20	0.3	13270	25	39	0.3					14441	28	27	0.2	10536	20	43	0.4
1951	41473	87	0.2	1481	4	9	0.6	3707	9	20	0.5	7050	17	7	0.1	9488	23	11	0.1					10798	26	15	0.1	8949	22	25	0.3
1952	30549	60	0.2	911	3	11	1.2	2657	9	8	0.3	5329	17	7	0.1	6453	21	7	0.1					7685	25	8	0.1	7314	24	19	0.3
1953	24169	37	0.2	738	3	4	0.5	2258	9	5	0.2	4306	18	7	0.2	4599	20	7	0.1					5964	25	5	0.1	5904	25	9	0.2
1954	22329	65	0.3	660	3	1	0.2	2042	9	9	0.4	3966	18	7	0.2	4678	21	13	0.3	1342	6	4	0.3	5419	24	9	0.2	4303	19	22	0.5
1955	22589	62	0.3	686	3	3	0.4	2027	9	13	0.6	3868	17	8	0.2	4860	22	13	0.3	1446	6	4	0.3	5876	26	9	0.2	3824	17	12	0.3
1956	26312	76	0.3	895	3	2	0.2	2466	9	22	0.9	4227	16	11	0.3	6228	24	11	0.2	1651	6	5	0.3	6728	26	11	0.2	4117	16	14	0.3
1957	31211	81	0.3	1109	4	5	0.5	2818	9	22	0.8	4663	15	9	0.2	8108	26	11	0.1	1926	6	7	0.4	7907	25	15	0.2	4660	15	12	0.3
1958	35332	109	0.3	1337	4	7	0.5	3006	9	22	0.7	5134	15	13	0.3	9567	27	19	0.2	2106	6	3	0.1	9080	26	19	0.2	5118	14	29	0.6
1959	38134	121	0.3	1561	4	6	0.4	3131	8	20	0.6	5384	14	19	0.4	10786	28	30	0.3	2297	6	6	0.3	9692	25	12	0.1	5383	14	28	0.5
50-59	324,364	873	0.3	11,080	3	62	0.6	26,820	9	173	0.6	51,817	16	108	0.2	78,237	24	161	0.2	10,772	3	29	0.3	83,470	26	130	0.2	60,168	19	210	0.3
1960	37808	145	0.4	1686	4	6	0.4	2986	8	31	1.0	5303	14	15	0.3	10631	28	32	0.3	2242	6	10	0.4	9597	25	20	0.2	5371	14	31	0.6
1961	35866	134	0.4	1666	5	5	0.3	2864	8	19	0.7	5365	15	25	0.5	10200	28	25	0.2	2084	6	7	0.3	8651	24	22	0.3	5016	14	31	0.6
1962	34736	125	0.4	1440	4	5	0.3	2677	8	20	0.7	5236	15	23	0.4	10283	30	34	0.3	1904	5	8	0.4	8473	24	13	0.2	4743	14	22	0.5
1963	33458	130	0.4	1282	4	4	0.3	2724	8	26	1.0	4854	15	18	0.4	10393	31	31	0.3	1861	6	10	0.5	7697	23	23	0.3	4637	14	18	0.4
1964	36226	150	0.5	1455	4	7	0.5	2966	8	26	0.9	5077	14	24	0.5	11261	32	33	0.3	2194	6	8	0.4	7897	22	17	0.2	4544	13	42	0.9
1965	36795	139	0.4	1717	5	8	0.5	3076	8	26	0.8	5200	14	13	0.3	11730	32	36	0.3	2236	6	6	0.3	8036	22	16	0.2	4801	13	34	0.7
1966	35815	146	0.4	1683	5	5	0.3	2848	8	23	0.8	5335	15	19	0.4	11007	31	29	0.3	2335	7	10	0.4	7811	22	19	0.2	4796	13	41	0.9
1967	36188	184	0.5	1914	5	14	0.7	2809	8	28	1.0	5147	14	23	0.4	10843	30	42	0.4	2366	7	9	0.4	7890	22	20	0.3	5159	14	48	0.9
1968	37614	211	0.6	2072	6	12	0.6	3211	9	30	0.9	5508	15	28	0.5	10726	29	43	0.4	2727	7	16	0.6	7900	21	32	0.4	5441	14	51	0.9
1969	41553	313	0.8	2625	6	19	0.7	3557	9	53	1.5	6001	14	43	0.7	11695	28	66	0.6	3002	7	16	0.5	8514	20	40	0.5	6161	15	76	1.2
60-69	366,056	1,686	0.5	17,562	5	85	0.5	29,790	8	284	1.0	53,046	15	231	0.4	108,746	30	371	0.3	22,949	6	99	0.4	82,296	23	222	0.3	[illegible]	14	394	0.8
1970	44772	336	0.8	2756	6	20	0.7	3720	8	57	1.5	6524	15	47	0.7	12286	27	68	0.6	3190	7	21	0.7	9310	21	39	0.4	6975	16	86	1.2
1971	45387	366	0.8	2443	5	17	0.7	3615	8	63	1.7	6612	15	54	0.8	12266	27	76	0.6	3210	7	25	0.8	8917	20	41	0.5	8301	18	94	1.1
1972	46003	501	1.1	2160	5	20	0.9	3603	8	76	2.1	6909	15	67	1.0	12181	26	82	0.7	3713	8	40	1.1	8674	19	48	0.6	8783	19	165	1.9
1973	46989	580	1.2	1738	4	18	1.0	3636	8	90	2.5	7502	16	78	1.0	12377	26	156	1.3	3606	7	31	0.9	8584	18	61	0.7	9844	21	144	1.5
1974	43630	706	1.6	1210	3	18	1.5	3454	8	117	3.4	8146	19	129	1.6	11419	26	117	1.0	2921	7	44	1.5	7737	18	63	0.8	8944	20	218	2.5
1975	40065	860	2.1	1174	3	24	2.0	3142	8	141	4.5	7790	19	150	1.9	10246	26	130	1.3	2583	6	59	2.3	6949	17	82	1.2	8181	20	274	3.3
1976	39114	1443	3.7	1009	3	29	2.9	3203	8	276	8.6	8059	21	252	3.1	9874	25	193	2.0	2241	6	87	3.9	6841	17	147	2.1	7887	20	459	5.8
1977	41581	2086	5.0	1078	3	28	2.6	3581	9	429	12.0	8370	20	433	5.2	10018	24	269	2.7	2284	5	149	6.5	7771	19	236	3.0	8493	20	543	6.4
1978	47411	3497	7.4	1166	3	61	5.1	4616	10	716	15.5	9285	20	690	7.4	11213	24	435	3.9	2712	6	323	11.9	8834	19	466	5.2	9496	20	806	8.5
1979	53720	4919	9.2	1366	3	66	4.8	5655	11	1008	17.8	9941	19	955	9.6	12440	23	660	5.3	2804	5	428	15.3	10171	19	603	5.9	11323	21	1202	10.6
70-79	448,572	15,295	3.4	16,160	4	301	1.9	36,264	8	2,871	7.8	79,124	18	2,856	3.6	114,344	25	2,166	1.9	29,165	6	1,202	4.1	83,776	19	1,786	2.1	87,727	20	3,994	4.6
1980	59240	6014	10.2	1424	2	82	5.8	6383	11	1216	19.0	10442	18	991	9.5	13902	23	902	6.5	3217	5	545	16.9	11959	20	882	7.4	12009	20	1397	11.6
1981	63267	7024	11.1	1809	3	129	7.1	6527	10	1252	19.2	10676	17	1121	10.5	14938	24	1096	7.3	3833	6	756	19.7	13029	21	1136	8.7	12173	19	1534	12.6
1982	67021	8231	12.3	2120	3	171	8.1	6740	10	1467	21.8	10524	16	1191	11.3	16466	25	1409	8.6	3992	6	943	23.6	13922	21	1220	8.8	13298	20	1830	13.8
1983	72246	9601	13.3	2127	3	172	8.1	7186	10	1616	22.5	[illegible]	14	1321	13.2	18049	25	1774	9.8	3748	5	981	26.2	15675	22	1443	9.2	15475	21	2294	14.8
1984	75732	10668	14.1	2534	3	175	6.9	7475	10	1871	25.0	9803	13	1303	13.4	19943	26	2024	10.1	3937	5	1054	26.8	16629	22	1761	10.6	15621	20	2480	16.0
1985	77154	11195	14.5	2854	4	241	8.4	7146	9	1857	26.0	9162	12	1231	13.4	21691	28	2416	11.1	3914	5	1146	29.3	16794	22	1749	10.4	15593	20	2553	16.4
1986	76333	11049	14.5	2902	4	248	8.5	5877	8	1452	24.7	8679	11	1141	13.1	23742	31	2836	11.9	4162	5	1260	30.3	16194	21	1669	10.3	14777	19	2440	16.5
1987	73797	11250	15.2	3011	4	247	8.2	4983	7	1380	27.7	8147	11	1079	13.2	24563	33	3166	12.9	4140	6	1323	32.0	15429	21	1699	11.0	13624	18	2386	17.5
80-87	564,812	75,032	13.3	18,781	3	1,465	7.8	52,316	9	12,110	23.1	77,314	14	9,379	12.1	153,283	27	15,623	10.2	30,943	5	8,010	25.9	119,636	21	11,560	9.6	112,340	20	16,896	15.0
TOTAL	1,702,806	92,856	5.5	63,583	4	1,913	3.0	149,210	9	15,536	10.4	261,300	15	12,572	4.8	454,612	27	18,341	4.0	93,819	6	9,340	10.0	369,378	22	13,688	3.7	310,904	18	21,494	6.9

SOURCE: Engineering and Technology Degrees, 1969 through 1988, Engineering Manpower Commission

TABLE 7-4

ENGINEERING DEGREES AWARDED TO WOMEN, BY DEGREE LEVEL, 1968-69 - 1987-88

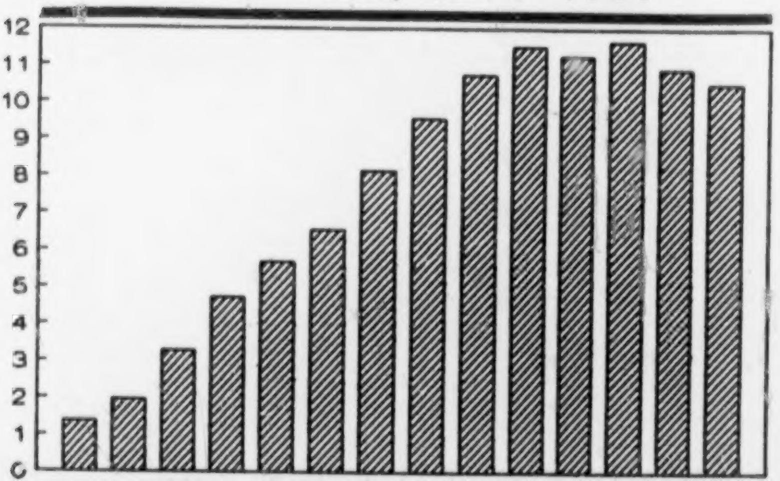
YEAR	BACHELORS Total	Women	% W	MASTERS+ Total	Women	% W	PhDs Total	Women	% W
1968-69*	39,972	328	0.8	14,980	107	0.7	3,387	23	0.7
1969-70*	42,966	358	0.8	15,548	170	1.1	3,620	16	0.4
1970-71*	43,167	353	0.8	16,383	158	1.0	3,640	25	0.7
1971-72	44,190	525	1.2	17,356	299	1.7	3,774	35	0.9
1972-73	43,429	624	1.4	17,152	226	1.3	3,587	48	1.3
1973-74	41,407	744	1.8	15,885	393	2.5	3,362	36	1.1
1974-75	38,210	878	2.3	15,773	380	2.4	3,039	53	1.7
1975-86	37,970	1,376	3.6	16,506	557	3.4	2,977	56	1.9
1976-77	40,095	1,961	4.9	16,551	646	3.9	2,814	67	2.4
1977-78	46,095	3,280	7.1	16,182	814	5.0	2,573	51	2.0
1978-79	52,598	4,716	9.0	15,624	866	5.5	2,815	61	2.2
1979-80	58,742	5,680	9.7	17,243	1,092	6.3	2,751	88	3.2
1980-81	62,935	6,545	10.4	17,914	1,225	6.8	2,841	90	3.2
1981-82	66,990	8,140	12.2	18,289	1,539	8.4	2,887	126	4.4
1982-83	72,471	9,566	13.2	19,909	1,796	9.0	3,023	142	4.7
1983-84	76,931	10,761	14.0	21,226	2,146	10.1	3,234	153	4.7
1984-85	77,892	11,516	14.8	22,502	2,538	11.3	3,382	192	5.7
1985-86	78,178	11,2[illegible]4	14.4	23,025	2,745	11.9	3,686	246	6.7
1986-87	75,735	11,675	15.4	24,290	3,119	12.8	4,275	296	6.9
1987-88	71,386	10,940	15.3	25,616	3,378	13.2	4,571	313	6.8
1988-88	68,824	10,529	15.3	26,412	3,585	13.6	5,017	440	8.8
TOTAL	1,180,183	111,759	9.5	394,366	27,779	7.0	71,255	2,557	3.6

* Totals for women in these years include only numbers actually reported. The totals would be higher if all institutions had reported all categories. From 1971-72 through 1984-85, estimates are included for schools that did not report. Beginning in 1985-86, no estimates were added for the few missing schools.

+ Includes professional Engineer degrees.

CHART 7-1

WOMEN BS GRADUATES IN ENGINEERING, 1976-1989



FIELD: Engineering

SOURCE: Engineering and Technology Degrees 1985 through 1989, Engineering Manpower Commission

TABLE 7-5

ENGINEERING DEGREES BY LEVEL, SEX, RACE & CITIZENSHIP, 1985 - 1989

	BACHELORS					MASTERS*					PH.D.				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
TOTAL	**77,892**	**78,178**	**75,735**	**71,386**	**68,824**	**22,502**	**23,025**	**24,290**	**25,616**	**26,412**	**3,383**	**3,686**	**4,175**	**4,571**	**5,017**
Women	11,516	11,264	11,675	10,940	10,529	2,538	2,745	3,119	3,378	3,585	192	246	296	313	440
Black	2,045	2,114	2,182	2,211	2,122	311	345	366	424	365	32	17	18	29	31
Hispanic*	1,732	1,864	1,840	1,920	1,996	362	322	384	440	469	34	38	25	36	37
Asian/Pacific	4,302	4,826	5,056	5,591	5,873	1,529	1,712	1,774	1,999	1,785	246	229	234	275	281
American Indian	109	129	149	187	192	28	27	33	36	32	4	4	6	3	2
Foreign National	5,958	6,275	6,048	5,763	5,719	6,115	5,735	6,315	7,474	7,329	1,400	1,441	1,800	2,033	2,299

*Includes Engineer Degrees *Excludes U. of Puerto Rico: BS: 363, 363, 516, 551, 553; MS: 9, 9, 9, 10, 28

TABLE 7-6

PERCENT OF ENGINEERING BS DEGREES AWARDED TO WOMEN AND MINORITIES

	1974	1976	1978	1980	1982	1984	1985	1986	1987	1988	1989
Women	1.80	3.62	7.11	9.67	12.15	13.99	14.79	14.41	15.42	15.35	15.30
Black	1.83	2.05	1.94	2.25	2.45	2.63	2.63	2.70	2.88	3.10	3.08
Hispanics*	1.56	1.81	1.91	1.72	1.91	2.20	2.23	2.41	2.43	2.69	2.90
Asian/Pacific	2.31	2.83	2.59	3.27	3.85	4.69	5.52	6.17	6.67	7.86	8.53
Am. Indian	0.08	0.11	0.08	0.10	0.14	0.15	0.14	0.17	0.20	0.27	0.28
Foreign Nat.	5.88	7.37	6.69	8.33	8.08	7.58	7.65	8.03	7.99	7.99	8.31

*Exclusive of the University of Puerto Rico

TABLE 7-7

PERCENT OF ENGINEERING DEGREES AWARDED TO FOREIGN NATIONALS

Year	B.S	M.S.	Ph.D	Year	B.S.	M.S.	PH.D
1974	5.88	19.,51	30.16	1982	8.08	28.50	40.42
1975	6.45	20.61	29.32	1983	8.49	25.84	39.43
1976	7.37	22.36	35.61	1984	7.58	26.99	38.75
1977	7.47	23.11	35.36	1985	7.65	27.18	41.38
1978	6.69	22.99	33.97	1986	8.03	24.91	39.09
1979	7.20	25.24	33.00	1987	7.99	26.00	43.11
1980	8.33	26.17	35.70	1988	8.07	28.61	44.48
1981	8.93	26.11	37.10	1989	8.31	28.30	45.82

FIELD: Engineering

SOURCE: Engineering and Technology Degrees, 1987 through 1989, Engineering Manpower Commission

TABLE 7-8

ENGINEERING DOCTORATE DEGREES AWARDED TO WOMEN, MINORITIES, & FOREIGN NATIONALS BY CURRICULUM, 1987 - 1989

CURRICULUM	TOTAL			WOMEN			BLACKS			HISPANICS			ASIAN AMERICANS			AMER IND			FOREIGN NATIONALS		
	1987	1988	1989	'87	'88	'89	'87	'88	'89	'87	'88	'89	'87	'88	'89	'87	'88	'89	'87	'88	'89
Aerospace	127	150	167	8	7	9	1	0	3	1	0	1	5	9	10	0	0	0	53	59	91
Agricultural	67	61	97	2	4	4	0	1	1	0	1	1	0	0	3	0	0	0	35	22	48
Architectural	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bioengineering	56	70	86	10	9	18	1	0	2	0	1	3	4	2	4	0	0	0	15	10	17
Ceramics	30	24	25	3	0	2	0	0	0	0	0	1	0	1	0	0	0	0	10	13	9
Chemical	599	657	680	65	65	78	3	5	2	7	4	6	38	64	37	0	0	0	205	229	250
Civil/Constr	496	518	554	28	29	52	2	1	2	3	4	3	23	21	30	1	0	0	259	286	305
Computer	205	262	277	21	23	33	1	0	3	1	1	1	9	19	13	3	0	0	93	94	108
EE	811	1003	1139	38	51	79	4	9	8	4	10	10	64	63	71	2	1	1	357	463	517
Eng Science	217	191	238	23	10	19	1	1	2	0	1	0	14	12	10	0	0	1	66	71	85
Environmental	43	63	49	4	13	10	0	0	0	0	0	1	0	3	3	0	0	0	18	26	14
Gen Engineering	63	66	81	2	1	6	0	1	1	1	1	0	2	8	9	0	0	0	18	30	41
Industrial	158	149	204	18	22	28	0	2	3	2	1	2	6	3	16	0	1	0	80	89	110
Marine	21	30	26	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	4	20	18
Materials/Metall	337	310	326	37	29	40	2	1	0	2	4	0	17	19	28	0	0	0	141	130	142
Mechanical	691	738	795	18	32	33	1	0	3	2	6	5	41	46	32	0	1	0	348	381	425
Mining/Mineral	55	56	74	6	4	9	1	1	0	0	1	0	0	2	2	0	0	0	22	16	32
Nuclear	98	102	90	3	3	6	0	3	0	1	0	1	6	3	3	0	0	0	38	45	42
Petroleum/Nat Gas	19	38	29	0	2	1	1	1	1	0	1	0	0	0	2	0	0	0	11	14	14
Systems	69	63	56	8	5	8	0	2	0	1	0	2	4	0	6	0	0	0	24	31	27
Others	13	20	24	1	4	4	0	1	0	0	0	0	0	0	2	0	0	0	3	4	4
TOTAL	4175	4571	5017	296	313	440	18	29	31	25	36	37	234	275	281	6	3	2	1800	2033	2299

FIELD: Engineering

SOURCE: Engineering and Technology Degrees, 1987 through 1989, Engineering Manpower Commission

TABLE 7-8 (continued)

ENGINEERING MASTERS* DEGREES AWARDED TO WOMEN, MINORITIES & FOREIGN NATIONALS BY CURRICULUM, 1987 - 1989

CURRICULUM	TOTAL			WOMEN			BLACKS			HISPANICS			ASIAN AMERICANS			AMER IND			FOREIGN NATIONALS		
	1987	1988	1989	'87	'88	'89	'87	'88	'89	'87	'88	'89	'87	'88	'89	'87	'88	'89	'87	'88	'89
Aerospace	733	843	865	50	65	65	4	4	2	13	18	15	31	39	35	1	1	0	113	143	185
Agricultural	154	183	160	9	21	13	0	1	0	1	2	0	2	3	3	0	0	0	46	72	64
Architectural	33	34	29	2	4	0	1	0	0	1	0	0	1	2	0	0	1	0	13	14	13
Bioengineering	270	257	303	72	74	66	4	2	6	5	4	3	13	13	12	0	0	0	46	44	82
Ceramics	102	96	100	26	21	20	0	1	0	1	1	0	4	3	6	0	0	1	27	30	24
Chemical	1314	1274	1220	233	207	222	20	24	21	24	20	38	77	80	84	0	0	4	355	385	360
Civil/Constr	3052	3041	3050	357	345	360	33	30	38	54	57	69	145	171	184	6	2	8	1034	1145	1082
Computer	2670	2881	2930	568	568	607	53	45	52	39	45	38	292	236	288	3	3	3	635	752	782
EE	6780	7335	7520	609	746	815	118	109	136	124	151	131	630	685	739	13	7	9	1763	2168	2106
Eng Science	683	646	675	108	107	118	11	11	13	9	12	11	66	52	73	0	0	2	96	99	123
Environmental	337	329	427	89	100	103	1	1	4	8	6	6	11	9	25	0	0	0	59	52	92
Gen Engineering	499	565	601	50	65	76	4	5	11	9	8	10	57	54	75	1	1	0	119	161	181
Industrial	1948	2140	2404	334	379	412	46	53	72	32	54	58	95	103	130	0	9	0	490	494	575
Marine	132	120	121	7	5	9	0	0	0	0	4	1	2	1	2	0	0	0	38	55	43
Materials/Metall	661	623	672	109	119	130	5	5	2	8	9	10	31	42	45	0	2	0	203	204	213
Mechanical	3511	3767	3855	248	299	304	43	46	38	45	61	54	248	226	240	7	3	8	1010	1137	1194
Mining/Mineral	296	282	237	52	39	39	2	1	1	4	1	3	7	1	2	1	1	0	60	71	54
Nuclear	272	221	245	26	17	19	2	0	1	4	5	5	8	11	6	1	0	1	56	84	63
Petroleum/Nat Gas	199	220	197	19	18	14	3	2	0	2	11	4	6	10	12	0	1	0	47	51	72
Systems	523	636	662	114	156	154	13	16	23	6	8	11	46	41	33	0	1	0	91	126	141
Others	121	123	139	37	22	39	3	0	4	4	2	1	2	3	5	0	0	0	14	42	25
TOTAL	24290	25616	26412	3119	3377	3585	366	356	424	393	479	468	1774	1785	1999	33	32	36	6315	7329	7474

* Includes Professional Degrees in Engineering.

FIELD: Engineering

SOURCE: Engineering and Technology Degrees, 1987 through 1989, Engineering Manpower Commission

TABLE 7-8 (continued)

ENGINEERING BACHELORS DEGREES AWARDED TO WOMEN, MINORITIES & FOREIGN NATIONALS BY CURRICULUM, 1987 - 1989

CURRICULUM	TOTAL			WOMEN			BLACKS			HISPANICS			ASIAN AMERICANS			AMERICAN IN			FOREIGN NATIONA		
	1987	1988	1989	'87	'88	'89	'87	'88	'89	'87	'88	'89	'87	'88	'89	'87	'88	'89	'87	'88	'89
Aerospace	2845	2949	3065	240	279	304	38	38	56	64	76	89	101	142	158	3	8	11	105	116	149
Agricultural	456	362	330	57	28	29	4	5	3	6	3	8	6	2	4	0	1	0	18	25	20
Architectural	400	356	346	87	65	75	28	29	36	11	21	11	23	39	11	2	0	3	44	50	67
Bioengineering	649	636	677	254	199	218	17	13	15	33	27	26	82	77	80	2	4	2	32	38	53
Ceramics	328	368	289	96	106	74	4	15	7	3	11	3	12	14	11	1	0	0	9	8	6
Chemical	5129	4082	3711	1379	1079	1101	182	164	136	149	152	150	231	234	246	10	11	6	237	261	242
Civil/Constr	8388	7714	7688	1096	1072	1036	200	179	170	252	267	274	354	359	353	18	36	28	1194	950	864
Computer	5012	4275	4398	1072	797	817	133	117	139	199	185	172	450	438	550	12	15	15	443	422	415
EE	25198	24367	22929	3173	3177	2930	853	850	861	762	784	861	2674	2887	2930	54	54	51	2251	2229	2238
Eng Science	1155	1378	1339	220	260	226	22	36	34	19	34	22	62	133	160	4	3	2	46	59	72
Environmental	124	192	138	32	46	48	1	0	1	1	3	2	4	3	3	0	1	0	10	11	1
Gen Engineering	1315	1085	1058	230	228	197	50	62	42	47	43	47	76	93	106	3	4	2	108	54	55
Industrial	4572	4584	4519	1383	1283	1304	190	223	195	233	245	263	181	183	229	3	3	12	369	383	378
Marine	537	549	468	43	33	31	8	10	4	10	10	3	10	15	15	2	0	0	29	24	17
Materials/Metall	885	877	842	207	202	196	17	21	15	13	20	20	41	68	42	2	4	3	31	32	32
Mechanical	16056	15610	15369	1724	1772	1682	383	421	377	488	500	522	701	821	898	28	32	55	855	873	935
Mining/Mineral	628	404	274	96	86	54	2	2	2	9	7	7	5	10	6	3	7	0	63	47	36
Nuclear	324	306	303	30	34	35	5	6	4	8	14	14	14	18	13	0	0	0	9	16	14
Petroleum/Nat Gas	1064	612	436	117	53	48	20	10	5	37	22	21	10	16	11	0	4	2	169	119	65
Systems	458	474	457	96	100	83	20	13	14	10	15	13	19	34	40	1	0	0	10	39	53
Others	212	206	188	43	41	41	5	7	6	2	2	1	0	5	7	1	0	0	16	7	7
TOTAL	75735	71386	68824	11675	10940	10529	2182	2221	2122	2356	2441	2529	5056	5591	5873	149	187	192	6048	5763	5719

FIELD: Engineering

SOURCE: Engineering and Technology Degrees 1975 through 1989, Engineering Manpower Commision

TABLE 7-9

BACHELORS DEGREES IN CHEMICAL ENGINEERING BY SEX, MINORITY GROUP AND CITIZENSHIP, 1975 - 1989

YEAR	ALL ENGINEERS	CHEM ENG.		WOMEN		BLACKS		HISPANICS		ASIAN		AM. INDIAN		FOREIGN	
			%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1975	38,210	3,167	8.3	131	4.1	40	1.3	37	1.2	74	2.3	0	0.0	--	--
1976	37,970	3,146	8.3	239	7.6	54	1.7	22	0.7	72	2.3	2	0.1	267	8.5
1977	40,095	3,593	9.0	403	11.2	52	1.4	37	1.0	113	3.1	2	0.1	288	8.0
1978	46,091	4,621	10.0	676	14.6	86	1.9	58	1.3	139	3.0	4	0.1	291	6.3
1979	52,598	5,837	11.1	978	16.8	107	1.8	40	0.7	210	3.6	5	0.1	361	6.2
1980	58,742	6,555	11.2	1,130	17.2	137	2.1	87	1.3	239	3.6	11	0.2	353	5.4
1981	62,935	6,863	10.9	1,162	16.9	166	2.4	179	2.6	234	3.4	17	0.2	429	6.3
1982	66,990	7,039	10.5	1,448	20.6	182	2.6	111	1.6	258	3.7	10	0.1	311	4.4
1983	72,471	7,499	10.3	1,703	22.7	207	2.8	195	2.6	309	4.1	9	0.1	379	5.1
1984	76,931	7,685	10.0	1,829	23.8	250	3.3	113	1.5	376	4.9	9	0.1	328	4.3
1985	77,892	7,324	9.4	1,886	25.8	221	3.0	145	2.0	341	4.7	12	0.2	330	4.5
1986	78,178	6,148	7.9	1,483	24.1	194	3.2	179	2.9	296	4.8	13	0.2	281	4.6
1987	75,735	5,129	6.8	1,379	26.9	186	3.6	149	2.9	231	4.5	10	0.2	237	4.6
1988	71,386	4,082	5.7	1,079	26.4	164	4.0	152	3.7	234	5.7	11	0.3	261	6.4
1989	68,824	3,711	5.4	1,101	29.7	136	3.7	150	4.0	246	6.6	6	0.2	242	6.5
TOTAL	925,048	82,399	8.9	16,627	20.2	2,182	2.6	1,654	2.0	3,372	4.1	121	0.1	4,358	5.3

TABLE 7-10

BACHELORS DEGREES IN CIVIL ENGINEERING BY SEX, MINORITY GROUP AND CITIZENSHIP, 1975 - 1989

YEAR	ALL ENGINEERS	CIVIL ENG.		WOMEN		BLACKS		HISPANICS		ASIAN		AM. INDIAN		FOREIGN	
			%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1975	38,210	7,957	20.8	154	1.9	94	1.2	147	1.8	196	2.5	9	0.1	--	--
1976	37,970	7,947	20.9	220	2.8	87	1.1	126	1.6	182	2.3	13	0.2	471	5.9
1977	40,095	8,248	20.6	398	4.8	109	1.3	122	1.5	251	3.0	11	0.1	563	6.8
1978	46,091	9,168	19.9	633	6.9	118	1.3	169	1.8	209	2.3	5	0.1	728	7.9
1979	52,598	10,030	19.1	948	9.5	152	1.5	149	1.5	303	3.0	11	0.1	890	8.9
1980	58,742	10,191	17.3	931	9.1	158	1.6	168	1.6	290	2.8	9	0.1	1,309	12.8
1981	62,935	10,547	16.8	1,065	10.1	176	1.7	265	2.5	323	3.1	17	0.2	1,455	13.8
1982	66,990	10,330	15.4	1,144	11.1	176	1.7	181	1.8	309	3.0	14	0.1	1,456	14.1
1983	72,471	10,484	14.5	1,315	12.5	213	2.0	300	2.9	369	3.5	12	0.1	1,619	15.4
1984	76,931	9,877	12.8	1,295	13.1	197	2.0	254	2.6	356	3.6	14	0.1	1,452	14.7
1985	77,892	9,468	12.2	1,214	12.8	188	2.0	222	2.3	343	3.6	16	0.2	1,509	15.9
1986	78,178	8,798	11.3	1,091	12.4	168	1.9	282	3.2	351	4.0	14	0.2	1,425	16.2
1987	75,735	8,388	11.1	1,096	13.1	200	2.4	252	3.0	354	4.2	18	0.2	1,194	14.2
1988	71,386	7,714	10.8	1,072	13.9	179	2.3	267	3.5	359	4.7	36	0.5	950	12.3
1989	68,824	7,688	11.2	1,036	13.5	170	2.2	274	3.6	353	4.6	28	0.4	864	11.2
TOTAL	925,048	136,835	14.8	13,612	9.9	2,385	1.7	3,178	2.3	4,548	3.3	227	0.2	15,885	12.3

TABLE 7-11

BACHELORS DEGREES IN COMPUTER ENGINEERING BY SEX, MINORITY GROUP AND CITIZENSHIP, 1975 - 1989

YEAR	ALL ENGINEERS	COMP ENG.	%	WOMEN No.	%	BLACKS No.	%	HISPANICS No.	%	ASIAN No.	%	AM. INDIAN No.	%	FOREIGN No.	%
1975	38,210	599	1.6	54	9.0	9	1.5	6	1.0	10	1.7	1	0.2	--	--
1976	37,970	796	2.1	79	9.9	24	3.0	5	0.6	25	3.1	2	0.3	37	4.6
1977	40,095	1,280	3.2	117	9.1	40	3.1	11	0.9	111	8.7	3	0.2	82	6.4
1978	46,091	1,546	3.4	193	12.5	39	2.5	23	1.5	140	9.1	1	0.1	93	6.0
1979	52,598	1,510	2.9	206	13.6	22	1.5	23	1.5	93	6.2	0	0.0	77	5.1
1980	58,742	1,816	3.1	260	14.3	34	1.9	32	1.8	180	9.9	2	0.1	94	5.2
1981	62,935	2,356	3.7	316	13.4	40	1.7	35	1.5	212	9.0	2	0.1	167	7.1
1982	66,990	2,666	4.0	476	17.9	63	2.4	14	0.5	195	7.3	15	0.6	152	5.7
1983	72,471	2,643	3.6	506	19.1	62	2.3	59	2.2	185	7.0	3	0.1	130	4.9
1984	76,931	3,499	4.5	800	22.9	83	2.4	64	1.8	289	8.3	2	0.1	176	5.0
1985	77,892	4,248	5.5	945	22.2	102	2.4	76	1.8	393	9.3	4	0.1	257	6.0
1986	78,178	4,999	6.4	1,045	20.9	91	1.8	132	2.6	482	9.6	10	0.2	381	7.6
1987	75,735	5,012	6.6	1,072	21.4	133	2.7	199	4.0	450	9.0	12	0.2	443	8.8
1988	71,386	4,275	6.0	797	18.6	117	2.7	185	4.3	438	10.2	15	0.4	422	9.9
1989	68,824	4,398	6.4	817	18.6	139	3.2	172	3.9	550	12.5	15	0.3	415	9.4
TOTAL	925,048	41,643	4.5	7,683	18.4	998	2.4	1,036	2.5	3,753	9.0	87	0.2	2,926	7.1

TABLE 7-12

BACHELORS DEGREES IN ELECTRICAL ENGINEERING BY SEX, MINORITY GROUP AND CITIZENSHIP, 1975 - 1989

YEAR	ALL ENGINEERS	ELEC ENG.	%	WOMEN No.	%	BLACKS No.	%	HISPANICS No.	%	ASIAN No.	%	AM. INDIAN No.	%	FOREIGN No.	%
1975	38,210	10,277	26.9	130	1.3	286	2.8	203	2.0	318	3.1	11	0.1	--	--
1976	37,970	9,954	26.2	207	2.1	257	2.6	194	1.9	310	3.1	11	0.1	650	6.5
1977	40,095	9,837	24.5	239	2.4	296	3.0	186	1.9	276	2.8	7	0.1	727	7.4
1978	46,091	10,702	23.2	414	3.9	293	2.7	195	1.8	270	2.5	9	0.1	686	6.4
1979	52,598	12,213	23.2	624	5.1	344	2.8	226	1.9	394	3.2	16	0.1	889	7.3
1980	58,742	13,594	23.1	807	5.9	464	3.4	269	2.0	565	4.2	13	0.1	1,095	8.1
1981	62,935	14,558	23.1	929	6.4	499	3.4	435	3.0	683	4.7	22	0.2	1,317	9.0
1982	66,990	16,094	24.0	1,280	8.0	525	3.3	344	2.1	881	5.5	19	0.1	1,333	8.3
1983	72,471	18,590	25.7	1,786	9.6	603	3.2	593	3.2	1,176	6.3	27	0.1	1,722	9.3
1984	76,931	20,495	26.6	1,996	9.7	626	3.1	526	2.6	1,320	6.4	19	0.1	1,761	8.6
1985	77,892	22,055	28.3	2,386	11.6	720	3.3	561	2.7	1,866	9.1	25	0.1	1,828	8.9
1986	78,178	24,514	31.4	2,755	12.5	806	3.7	721	3.3	2,337	10.6	44	0.2	2,165	9.8
1987	75,735	25,198	33.3	3,173	12.6	853	3.4	762	3.0	2,674	10.6	54	0.2	2,251	8.9
1988	71,386	24,367	34.1	3,177	13.0	850	3.5	784	3.2	2,887	11.8	54	0.2	2,229	9.1
1989	68,824	22,929	33.3	2,930	12.8	861	3.8	861	3.8	2,930	12.8	51	0.2	2,238	9.8
TOTAL	925,048	255,377	30.4	22,841	8.9	8,283	3.2	6,860	2.7	18,887	7.4	382	0.1	20,891	8.5

TABLE 7-13

BACHELORS DEGREES IN INDUSTRIAL ENGINEERING BY SEX, MINORITY GROUP AND CITIZENSHIP, 1975 - 1989

YEAR	ALL ENGINEERS	INDUS ENG.	%	WOMEN No.	WOMEN %	BLACKS No.	BLACKS %	HISPANICS No.	HISPANICS %	ASIAN No.	ASIAN %	AM. INDIAN No.	AM. INDIAN %	FOREIGN No.	FOREIGN %
1975	38,210	2,096	5.5	62	3.0	34	1.6	42	2.0	31	1.5	0	0.0	--	--
1976	37,970	1,826	4.8	84	4.6	28	1.5	31	1.7	47	2.6	3	0.2	186	10.2
1977	40,095	1,805	4.5	114	6.3	29	1.6	43	2.4	38	2.1	1	0.1	208	11.5
1978	46,091	2,054	4.5	233	11.3	51	2.5	36	1.8	62	3.0	3	0.1	203	9.9
1979	52,598	2,433	4.6	363	14.9	58	2.4	59	2.4	52	2.1	3	0.1	236	9.7
1980	58,742	2,710	4.6	456	16.8	66	2.4	61	2.3	87	3.2	2	0.1	290	10.7
1981	62,935	3,225	5.1	623	19.3	77	2.4	127	3.9	81	2.5	3	0.1	313	9.7
1982	66,990	3,695	5.5	849	23.0	131	3.5	79	2.1	71	1.9	3	0.1	283	7.7
1983	72,471	3,808	5.3	996	26.2	159	4.2	155	4.1	112	2.9	5	0.1	374	9.8
1984	76,931	3,923	5.1	1,065	27.1	176	4.5	111	2.8	136	3.5	4	0.1	317	8.1
1985	77,892	4,321	5.5	1,219	31.1	159	3.7	108	2.8	168	4.3	6	0.2	319	8.1
1986	78,178	4,645	5.9	1,266	29.3	168	3.9	228	5.3	179	4.1	7	0.2	378	8.7
1987	75,735	4,572	6.0	1,384	30.3	190	4.2	233	5.1	181	4.0	3	0.1	369	8.1
1988	71,386	4,584	6.4	1,283	28.0	223	4.9	245	5.3	183	4.0	3	0.1	383	8.4
1989	68,824	4,519	6.6	1,304	28.9	195	4.3	263	5.8	229	5.1	12	0.3	378	8.4
TOTAL	925,048	50,216	5.4	11,301	22.5	1,744	3.5	1,821	3.6	1,657	3.3	58	0.1	4,237	8.4

TABLE 7-14

BACHELORS DEGREES IN MECHANICAL ENGINEERING BY SEX, MINORITY GROUP AND CITIZENSHIP, 1975 - 1989

YEAR	ALL ENGINEERS	MECH ENG.	%	WOMEN No.	WOMEN %	BLACKS No.	BLACKS %	HISPANICS No.	HISPANICS %	ASIAN No.	ASIAN %	AM. INDIAN No.	AM. INDIAN %	FOREIGN No.	FOREIGN %
1975	38,210	7,076	18.5	85	1.2	150	2.1	113	1.6	130	1.8	9	0.1	--	--
1976	37,970	6,825	18.0	141	2.1	120	1.8	101	1.5	138	2.0	4	0.1	484	7.1
1977	40,095	7,549	18.8	242	3.2	163	2.2	90	1.2	182	2.4	7	0.1	534	7.1
1978	46,091	8,786	19.1	428	4.9	128	1.5	127	1.4	184	2.1	5	0.1	561	6.4
1979	52,598	10,076	19.2	593	5.9	225	2.2	152	1.5	243	2.4	18	0.2	602	6.0
1980	58,742	11,916	20.3	864	7.3	264	2.2	204	1.7	281	2.4	8	0.1	915	7.7
1981	62,935	13,462	21.4	1,070	7.9	322	2.4	259	1.9	414	3.1	18	0.1	1,092	8.1
1982	66,990	14,178	21.2	1,228	8.7	336	2.4	250	1.8	482	3.4	15	0.1	968	6.8
1983	72,471	16,404	22.7	1,503	9.1	397	2.4	338	2.1	562	3.4	21	0.1	1,182	7.2
1984	76,931	17,214	22.4	1,792	10.4	373	2.2	302	1.8	618	3.6	34	0.2	1,006	5.8
1985	77,892	17,152	22.0	1,812	10.5	401	2.3	352	2.0	691	4.0	29	0.2	976	5.7
1986	78,178	16,706	21.4	1,727	10.1	430	2.5	385	2.2	670	3.9	21	0.1	942	5.5
1987	75,735	16,056	21.2	1,724	10.7	383	2.4	488	3.0	701	4.4	28	0.2	855	5.3
1988	71,386	15,610	21.9	1,772	11.4	421	2.7	500	3.2	821	5.3	32	0.2	873	5.6
1989	68,824	15,369	22.3	1,682	10.9	377	2.5	522	3.4	898	5.8	55	0.4	935	6.1
TOTAL	925,048	19 ,159	21.0	16,663	8.6	4,490	2.3	4,183	2.2	7,015	3.6	304	0.2	11,925	6.4

FIELD: Engineering

SOURCE: Engineering and Technology Degrees, 1974 through 1989 Series, Engineering Manpower Commission

TABLE 7-15

NUMBER AND PERCENT OF ENGINEERING DEGREES GRANTED BY LEVEL OF DEGREE AND MINORITY GROUP, 1974-75 - 1988-89

	TOTAL		BLACK		HISPANICS†		ASIAN/ PACIFIC		AMERICAN INDIAN		FOREIGN NATIONALS	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1974-75												
Bachelor's	38,210	100.0	734	1.92	1,060	2.77	883	2.31	44	0.12	2,466	6.45
Master's**	15,773	100.0	141	0.89	185	1.12	482	3.06	3	0.02	3,250	20.61
Ph.D.	3,039	100.0	17	0.55	28	0.92	141	4.64	2	0.07	891	29.32
1975-76												
Bachelor's	37,970	100.0	777	2.05	1,019	2.68	1,074	2.83	41	0.11	2,799	7.37
Master's**	16,506	100.0	154	0.93	191	1.16	782	4.74	14	0.09	3,691	22.36
Ph.D.	2,977	100.0	10	0.33	15	0.50	168	5.64	0	--	1,060	35.61
1976-77												
Bachelor's	40,095	100.0	844	2.11	1,035	2.58	1,146	2.86	36	0.09	2,996	7.47
Master's**	16,551	100.0	147	0.89	217	1.31	708	4.28	7	0.04	3,825	23.11
Ph.D.	2,814	100.0	16	0.57	22	0.78	158	5.62	1	0.04	995	35.36
1977-78												
Bachelor's	46,091	100.0	894	1.94	1,072	2.33	1,195	2.59	37	0.08	3,084	6.69
Master's**	16,182	100.0	202	1.25	243	1.50	797	4.93	4	0.03	3,720	22.99
Ph.D.	2,573	100.0	15	0.58	25	0.97	175	6.80	3	0.12	874	33.97
1978-79												
Bachelor's	52,598	100.0	1,076	2.05	1,212	2.30	1,532	2.91	59	0.11	3,788	7.20
Master's**	15,624	100.0	157	1.01	213	1.36	675	4.32	9	0.06	3,944	25.24
Ph.D.	2,815	100.0	19	0.68	22	0.78	177	6.29	0	-	929	33.00
1979-80												
Bachelor's	58,742	100.0	1,320	2.25	1,332	2.27	1,922	3.27	60	0.10	4,895	8.33
Master's**	17,243	100.0	167	0.97	247	1.43	827	4.80	4	0.02	4,512	26.17
Ph.D.	2,751	100.0	19	0.69	25	0.91	154	5.60	1	0.04	982	35.70
1980-81												
Bachelor's	62,935	100.0	1,445	2.30	1,513	2.40	2,267	3.60	90	0.14	5,622	8.93
Master's**	17,914	100.0	183	1.02	281	1.57	968	5.40	8	0.04	4,677	26.11
Ph.D.	2,841	100.0	16	0.56	20	0.70	148	5.21	3	0.11	1,054	37.10
1981-82												
Bachelor's	66,990	100.0	1,644	2.45	1,608	2.40	2,577	3.85	91	0.14	5,410	8.08
Master's**	18,543	100.0	188	1.01	218	1.18	850	4.58	15	0.80	5,284	28.50
Ph.D.	2,887	100.0	11	0.38	26	0.90	124	4.30	2	0.07	1,167	40.42
1982-83												
Bachelor's	72,471	100.0	1,842	2.54	1,883	2.60	3,098	4.27	97	0.13	6,151	8.49
Master's**	19,909	100.0	258	1.30	310	1.56	1,294	6.50	16	0.08	5,145	25.84
Ph.D.	3,023	100.0	19	0.63	41	1.36	173	5.72	0	-	1,192	39.43
1983-84												
Bachelor's	76,931	100.0	2,022	2.63	2,038	2.65	3,609	4.69	112	0.15	5,833	7.58
Master's**	21,226	100.0	257	1.21	364	1.72	1,354	6.38	25	0.12	5,728	27.00
Ph.D.	3,234	100.0	24	0.74	25	0.77	267	8.26	0		1,253	38.75
1984-85												
Bachelor's	77,892	100.0	2,045	2.63	2,095	2.69	4,302	5.52	109	0.14	5,938	7.65
Master's**	22,502	100.0	311	1.38	371	1.65	1,529	6.80	28	0.12	6,115	27.18
Ph.D.	3,383	100.0	32	0.95	34	1.01	246	7.27	4	0.12	1,400	41.38
1985-86*												
Bachelor's	78,178	100.0	2,114	2.70	2,227	2.85	4,824	6.17	129	0.17	6,275	8.03
Master's**	23,025	100.0	345	1.50	331	1.44	1,712	7.44	27	0.12	5,735	24.91
Ph.D.	3,686	100.0	17	0.46	38	1.03	229	6.21	4	0.11	1,441	39.09
1986-87*												
Bachelor's	75,735	100.0	2,182	2.88	2,356	3.11	5,056	6.67	149	0.20	6,048	7.99
Master's**	24290	100.0	366	1.51	393	1.62	1,774	7.30	33	0.14	6,315	26.00
Ph.D.	4,175	100.0	18	0.43	25	0.60	234	5.60	6	0.14	1,800	43.11
1987-88*												
Bachelor's	71,386	100.0	2,211	2.71	2,471	3.46	5,591	7.83	187	0.26	5,763	8.07
Master's**	25,616	100.0	365	1.42	479	1.87	1,785	6.97	32	0.12	7,329	28.61
Ph.D.	4,571	100.0	29	0.63	36	0.79	275	6.02	3	0.07	2,033	44.48
1988-89*												
Bachelor's	68,824	100.0	2,045	3.08	2,437	3.59	5,873	8.53	192	0.28	5,719	8.31
Master's**	26,412	100.0	424	1.61	468	1.77	1,999	7.57	36	0.14	7,474	28.30
Ph.D.	5,017	100.0	31	0.62	37	0.74	281	5.60	2	0.04	2,299	45.82

* Includes only numbers actually reported. ** Includes Engineer degrees. † Includes U. of Puerto Rico as follows:

1975-1989 Bachelor's: 416, 339, 333, 324, 404, 329, 320, 338, 349, 355, 363, 363, 516, 551, 553

1975-1989 Master's: 2, 7, 6, 9, 15, 7, 1, 8, 12, 9, 11, 9, 9, 9, 10, 28

FIELD: Engineering

SOURCE: Engineering and Technology Degrees, 1980 through 1987, Engineering Manpower Commission

TABLE 7-16

LEADING SCHOOLS IN NUMBER OF ENGINEERING DEGREES AWARDED TO WOMEN, 1987

	Bachelors			Masters+			Doctorates			All Degrees			Rank in			
School	Total	Women	%W	Total	Women	%W	Total	Women	%W	Total	Women	%W	1980	1982	1984	1986
Purdue U-W Lafayette	1277	271	21.2	409	49	12.0	94	3	3.2	1780	323	18.1	1	2	1	3
U Cal-Berkely	830	194	23.4	433	80	18.5	158	12	7.6	1421	286	20.1	15	4	5	11
Texas A&M University	1541	249	16.2	246	24	9.8	78	6	7.7	1865	279	15.0	3	1	11	1
Penn State Univ	1480	231	15.6	279	40	14.3	78	4	5.1	1837	275	15.0	8	7	4	2
U Ill-Champaign	1241	208	16.8	468	56	12.0	180	7	3.9	1889	271	14.3	9	5	3	5
Georgia Inst of Tech	1083	208	19.2	487	60	12.3	45	1	2.2	1615	269	16.7	7	3	2	6
Mass Inst of Tech	728	139	19.1	583	82	14.1	216	26	12.0	1527	247	16.2	2	6	6	4
Stanford Univ	341	76	22.3	958	152	15.9	168	15	8.9	1467	243	16.6	6	12	10	7
Ohio State Univ	1113	184	16.5	335	47	14.0	116	5	4.3	1564	236	15.1	29	10	8	9
Virginia Poly Inst	954	192	20.1	296	35	11.8	77	7	9.1	1327	234	17.6	14	9	9	7
U Michigan-Ann Arbor	867	154	17.8	474	62	13.1	110	6	5.5	1451	222	15.3	4	8	7	10
NC State U-Raleigh	906	167	18.4	217	29	13.4	51	3	5.9	1174	199	17.0	34	17	12	13
U Southern Calif	489	93	19.0	612	91	14.9	56	3	5.4	1157	187	16.2	#	*	36	44
Cornell Univ	531	117	22.0	390	48	12.3	125	11	8.8	1046	176	16.8	11	13	14	15
Michigan State U	732	164	22.4	115	9	7.8	39	2	5.1	886	175	19.8	5	11	13	14
U Missouri-Rolla	887	152	17.1	219	19	8.7	29	1	3.4	1135	172	15.2	28	16	18	17
Rensselaer Polytech	659	120	18.2	324	43	13.3	74	5	6.8	1057	168	15.9	#	23	16	18
Johns Hopkins Univ	188	32	17.0	440	121	27.5	26	6	23.1	654	159	24.3			\	23
U Maryland	742	129	17.4	201	25	12.4	39	4	10.3	982	158	16.1	#	*	33	22
U Wisconsin-Madison	809	112	13.8	277	33	11.9	85	3	3.5	1171	148	12.6	#	20	38	25
Northwestern Univ	336	104	31.0	257	42	16.3	108		0.0	701	146	20.8	39	26	39	21
U Washington	672	115	17.1	232	26	11.2	52	5	9.6	956	146	15.3	13	15	19	20
U Florida	712	111	15.6	232	27	11.6	66	3	4.5	1010	141	14.0	36	33	27	16
Northeastern	702	77	11.0	279	64	22.9	2	0	0.0	983	141	14.3	#	20	38	24
U Texas-Austin	815	101	12.4	313	35	11.2	92	0	0.0	1220	136	11.1	18	*	17	12
Michigan Tech Univ	798	120	15.0	76	7	9.2	7	0	0.0	881	127	14.4	33	22	15	33
Columbia Univ	255	53	20.8	316	66	20.9	48	7	14.6	619	126	20.4	#	25	29	30
U Minnesota	725	107	14.8	121	13	10.7	58	1	1.7	904	121	13.4				@
Colorado Sch of Mines	406	91	22.4	154	26	16.9	34	3	8.8	594	120	20.2	20	31	35	27
Auburn University	681	106	15.6	86	12	14.0	15	1	6.7	782	119	15.2	#	18	24	26
U Cal-Los Angeles	371	81	21.8	191	28	14.7	71	9	12.7	633	118	18.6	#	36	37	46
U Tennessee-Knoxville	563	102	18.1	105	15	14.3	18	1	5.6	686	118	17.2	#	*	28	28
U Puerto Rico	516	116	22.5	9	0	0.0	0	0		525	116	22.1				@
San Jose State Univ	356	74	20.8	53	41	77.4	0	0		409	115	28.1			\	35
Boston University	376	79	21.0	139	33	23.7	0	0	-	515	112	21.7	#	*	50	29
Clarkson Univ	562	100	17.8	55	10	18.2	15	0	0.0	632	110	17.4	26	30	25	42
U Virginia	268	56	20.9	191	47	24.6	31	5	16.1	490	108	22.0	12	28	20	41
Clemson University	501	91	18.2	127	15	11.8	13	1	7.7	641	107	16.7	#	*	41	40
Lehigh University	432	68	15.7	176	33	18.8	55	5	9.1	663	106	16.0	14	*	30	31
U Colorado-Boulder	428	67	15.7	207	34	16.4	36	1	2.8	671	102	15.2	17	19	34	36
U Mass-Amherst	421	80	19.0	134	21	15.7	33	1	3.0	588	102	17.3			\	47
Worcester Poly Inst	514	88	17.1	82	11	13.4	4	2	50.0	600	101	16.8	37	*	45	32
Drexel University	505	71	14.1	203	29	14.3	24	1	4.2	732	101	13.8			\	19
U Pittsburgh	474	84	17.7	146	9	6.2	28	6	21.4	648	99	15.3	10	24	22	37
Iowa State University	839	92	11.0	90	7	7.8	55	0	0.0	984	99	10.1	25	34	46	43
U Arizona	550	63	11.5	203	35	17.2	30	1	3.3	783	99	12.6	#	*	42	38
U Cal-San Diego	344	87	25.3	83	10	12.0	17	1	5.9	444	98	22.1			\	49
Gen Motors Inst	417	97	23.3	0	0		0	0		417	97	23.3	37	*	49	34
Arizona State U	549	68	12.4	180	24	13.3	21	0	0.0	750	92	12.3				@
U Cincinnati	378	60	15.9	171	31	18.1	23	1	4.3	572	92	16.1				@
TOTAL TOP 50 SCHOOLS	32864	5801	17.7	12374	1856	15.0	2800	185	6.6	48038	7842	16.3				
TOTAL ALL SCHOOLS	75735	11675	15.4	24290	3119	12.8	4175	296	7.1	104200	15090	14.5				

+ Includes Professional Degrees in Engineering. # Below 43rd in 1980. * Below 37th in 1982. \ Below 50th in 1984.
@ Below 81th in 1986.

FIELD: Engineering

SOURCE: Engineering and Technology Degrees, 1980 through 1988, Engineering Manpower Commission

TABLE 7-17

LEADING SCHOOLS IN NUMBER OF ENGINEERING DEGREES AWARDED TO WOMEN, 1988

School	Bachelors			Masters+			Doctorates			All Degrees			Rank in			
	Total	Women	%W	Total	Women	%W	Total	Women	%W	Total	Women	%W	1980	1982	1984	1986
U Cal-Berkely	768	161	21.0	436	108	24.8	200	20	10.0	1404	289	20.6	15	4	5	11
Georgia Inst of Tech	1061	197	18.6	509	84	16.5	63	6	9.5	1633	287	17.6	7	3	2	6
Purdue U-W Lafayette	1189	209	17.6	425	63	14.8	120	10	8.3	1734	282	16.3	1	2	1	3
U Ill-Champaign	1315	199	15.1	527	68	12.9	188	11	5.9	2030	278	13.7	9	5	3	5
Virginia Poly Inst	1041	223	21.4	344	42	12.2	83	6	7.2	1468	271	18.5	14	9	9	7
Mass Inst of Tech	677	155	22.9	640	89	13.9	247	20	8.1	1564	264	16.9	2	6	6	4
Stanford Univ	356	84	23.6	869	146	16.8	185	13	7.0	1410	243	17.2	6	12	10	7
Texas A&M University	1271	206	16.2	278	27	9.7	75	7	9.3	1624	240	14.8	3	1	11	1
Penn State Univ	1226	171	13.9	346	49	14.2	90	4	4.4	1662	224	13.5	8	7	4	2
U Michigan-Ann Arbor	842	153	18.2	514	60	11.7	108	4	3.7	1464	217	14.8	4	8	7	10
Cornell Univ	538	132	24.5	382	63	16.5	116	13	11.2	1036	208	20.1	11	13	14	15
NC State U-Raleigh	908	175	19.3	244	31	12.7	72	2	2.8	1224	208	17.0	34	17	12	13
U Maryland	720	137	19.0	183	27	14.8	39	4	10.3	942	166	17.8	♦	*	33	22
Cal State U-Long Bea	762	150	19.7	116	16	13.8	0	0	0.0	878	166	18.9				]
Johns Hopkins Univ	179	30	16.8	518	125	24.1	30	2	6.7	727	157	21.6			\	23
U Missouri-Rolla	809	129	15.9	240	25	10.4	79	2	6.9	1078	156	14.5	28	16	18	17
Ohio State Univ	910	116	12.7	307	38	12.4	61	2	3.3	1278	156	12.2	29	10	8	9
Polytechnic Univ	422	53	12.6	591	95	16.1	46	2	4.3	1059	150	14.2				]
U Southern Calif	575	86	15.0	502	60	12.0	85	1	1.2	1162	147	12.7	♦	*	36	44
Rensselaer Polytech	587	106	18.1	368	37	10.1	80	4	5.0	1035	147	14.2	♦	23	16	18
Michigan State U	562	129	23.0	127	12	9.4	35	2	5.7	724	143	19.8	5	11	13	14
U Washington	644	111	17.2	213	28	13.1	45	0	0.0	902	139	15.4	13	15	19	20
Northeastern	657	77	11.7	302	61	20.2	9	0	0.0	968	138	14.3	♦	20	38	24
U Florida	674	106	15.7	251	26	10.4	67	6	9.0	992	138	13.9	36	33	27	16
Michigan Tech Univ	761	124	16.3	82	13	15.9	9	1	11.1	852	138	16.2	33	22	15	33
U Texas-Austin	654	95	14.5	356	32	9.0	99	9	9.1	1109	136	12.3	18	*	17	12
George Washington U	185	43	23.2	558	90	16.1	40	2	5.0	783	135	17.2				]
Auburn University	654	122	18.7	82	6	7.3	23	1	4.3	759	129	17.0	♦	18	24	26
U Colorado-Boulder	492	76	15.4	261	49	18.8	32	0	0.0	785	125	15.9	17	19	34	36
Boston University	383	93	24.3	142	30	21.1	0	0	0.0	525	123	23.4	♦	*	50	29
U Minnesota	742	96	12.9	178	23	12.9	60	3	5.0	980	122	12.4				#
Rutgers University	520	105	20.2	159	16	10.1	22	0	0.0	701	121	17.3				]
U Arizona	561	89	15.9	231	30	13.0	33	2	6.1	825	121	14.7	♦	*	42	38
Columbia Univ	258	55	21.3	296	59	19.9	53	6	11.3	607	120	19.8	♦	25	29	30
U Wisconsin-Madison	701	80	11.4	264	31	11.7	107	8	7.5	1072	119	11.1	♦	20	38	25
Northwestern Univ	275	73	26.5	179	38	21.2	81	5	6.2	535	116	21.7	39	26	39	21
U Puerto Rico	521	114	21.9	10	2	20.0	0	0	0.0	531	116	21.8				#
U Virginia	304	71	23.4	178	37	20.8	47	4	8.5	529	112	21.2	12	28	20	41
Lehigh University	406	75	18.5	159	31	19.5	49	5	10.2	614	111	18.1	14	*	30	31
Gen Motors Inst	448	111	24.8	0	0	0.0	0	0	0.0	448	111	24.8	37	*	49	34
Worcester Poly Inst	500	99	19.8	91	10	11.0	5	0	0.0	596	109	18.3	37	*	45	32
U Mass-Amherst	396	74	18.7	160	25	15.6	34	6	17.6	590	105	17.8			\	47
U Cal-San Diego	348	78	22.4	74	14	18.9	76	13	17.1	498	105	21.1			\	49
Drexel University	556	79	14.2	175	21	12.0	30	2	6.7	761	102	13.4			\	19
U Cal-Los Angeles	327	73	22.3	222	22	9.9	70	3	4.3	619	98	15.8	♦	36	37	46
San Jose State Univ	327	57	17.4	181	40	22.1	0	0	0.0	508	97	19.1			\	35
Colorado Sch of Mines	325	77	23.7	135	17	12.6	33	2	6.1	493	96	19.5	20	31	35	27
CCNY (City Col, CUNY)	356	58	16.3	232	38	16.4	17	0	0.0	605	96	15.9				]
Cal Poly-San Luis Ob	645	95	14.7	16	0	0.0	0	0	0.0	661	95	14.4				]
U Cal-Davis	319	63	19.7	138	30	21.7	42	1	2.4	499	94	18.8				]
TOTAL TOP 50 SCHOOLS	30657	5470	17.8	13791	2084	15.1	3035	214	7.1	47483	7768	16.4				
TOTAL ALL SCHOOLS	71386	10940	15.3	25616	3364	12.3	4571	313	7.1	101001	14355	14.2				

+ Includes Professional Degrees in Engineering. ♦ Below 43 in 1980. * Below 37 in 1982. \ Below 50 in 1984.
# Below 81 in 1986.] Below 50 in 1987.

FIELD: Engineering

SOURCE: Engineering and Technology Degrees, 1980 through 1987, Engineering Manpower Commission

TABLE 7-18

LEADING SCHOOLS IN PERCENTAGE OF ENGINEERING DEGREES AWARDED TO WOMEN, 1987

	Bachelors			Masters+			Doctorates			All Degrees			Rank in			
School	Total	Women	%W	Total	Women	%W	Total	Women	%W	Total	Women	%W	1980	1982	1984	1986
San Jose State Univ	356	74	20.8	53	41	77.4	0	0		409	115	28.1			\	35
Johns Hopkins Univ	188	32	17.0	440	121	27.5	26	6	23.1	654	159	24.3			\	23
Gen Motors Inst	417	97	23.3	0	0		0	0		417	97	23.3	37	~	49	34
U Puerto Rico	516	116	22.5	9	0	0.0	0	0		525	116	22.1				▮
U Cal-San Diego	344	87	25.3	83	10	12.0	17	1	5.9	444	98	22.1			\	49
U Virginia	268	56	20.9	191	47	24.6	31	5	16.1	490	108	22.0	12	28	20	41
Boston University	376	79	21.0	139	33	23.7	0	0		515	112	21.7	•	~	50	29
Northwestern Univ	336	104	31.0	257	42	16.3	108		0.0	701	146	20.8	39	26	39	21
Columbia Univ	255	53	20.8	316	66	20.9	48	7	14.6	619	126	20.4	•	25	29	30
Colorado Sch of Mines	406	91	22.4	154	26	16.9	34	3	8.8	594	120	20.2	20	31	35	27
U Cal-Berkely	830	194	23.4	433	80	18.5	158	12	7.6	1421	286	20.1	15	4	5	11
Michigan State U	732	164	22.4	115	9	7.8	39	2	5.1	886	175	19.8	5	11	13	14
U Cal-Los Angeles	371	81	21.8	191	28	14.7	71	9	12.7	633	118	18.6	•	36	37	46
Purdue U-W Lafayette	1277	271	21.2	409	49	12.0	94	3	3.2	1780	323	18.1	1	2	1	3
Virginia Poly Inst	954	192	20.1	296	35	11.8	77	7	9.1	1327	234	17.6	14	9	9	7
Clarkson Univ	562	100	17.8	55	10	18.2	15	0	0.0	632	110	17.4	26	30	25	42
U Mass-Amherst	421	80	19.0	134	21	15.7	33	1	3.0	588	102	17.3			\	47
U Tennessee-Knoxville	563	102	18.1	105	15	14.3	18	1	5.6	686	118	17.2	•	~	28	28
NC State U-Raleigh	906	167	18.4	217	29	13.4	51	3	5.9	1174	199	17.0	34	17	12	13
Worcester Poly Inst	514	88	17.1	82	11	13.4	4	2	50.0	600	101	16.8	37	~	45	32
Cornell Univ	531	117	22.0	390	48	12.3	125	11	8.8	1046	176	16.8	11	13	14	15
Clemson University	501	91	18.2	127	15	11.8	13	1	7.7	641	107	16.7	•	~	41	40
Georgia Inst of Tech	1083	208	19.2	487	60	12.3	45	1	2.2	1615	269	16.7	7	3	2	6
Stanford Univ	341	76	22.3	958	152	15.9	168	15	8.9	1467	243	16.6	6	12	10	7
Mass Inst of Tech	728	139	19.1	583	82	14.1	216	26	12.0	1527	247	16.2	2	6	6	4
U Southern Calif	489	93	19.0	612	91	14.9	56	3	5.4	1157	187	16.2	•	~	36	44
U Maryland	742	129	17.4	201	25	12.4	39	4	10.3	982	158	16.1	•	~	33	22
U Cincinnati	378	60	15.9	171	31	18.1	23	1	4.3	572	92	16.1				▮
Lehigh University	432	68	15.7	176	33	18.8	55	5	9.1	663	106	16.0	14	~	30	31
Rensselaer Polytech	659	120	18.2	324	43	13.3	74	5	6.8	1057	168	15.9	•	23	16	18
U Michigan-Ann Arbor	867	154	17.8	474	62	13.1	110	6	5.5	1451	222	15.3	4	8	7	10
U Pittsburgh	474	84	17.7	146	9	6.2	28	6	21.4	648	99	15.3	10	24	22	37
U Washington	672	115	17.1	232	26	11.2	52	5	9.6	956	146	15.3	13	15	19	20
Auburn University	681	106	15.6	86	12	14.0	15	1	6.7	782	119	15.2	•	18	24	26
U Colorado-Boulder	428	67	15.7	207	34	16.4	36	1	2.8	671	102	15.2	17	19	34	36
U Missouri-Rolla	887	152	17.1	219	19	8.7	29	1	3.4	1135	172	15.2	28	16	18	17
Ohio State Univ	1113	184	16.5	335	47	14.0	116	5	4.3	1564	236	15.1	29	10	8	9
Penn State Univ	1480	231	15.6	279	40	14.3	78	4	5.1	1837	275	15.0	8	7	4	2
Texas A&M University	1541	249	16.2	246	24	9.8	78	6	7.7	1865	279	15.0	3	1	11	1
Michigan Tech Univ	798	120	15.0	76	7	9.2	7	0	0.0	881	127	14.4	33	22	15	33
U Ill-Champaign	1241	208	16.8	468	56	12.0	180	7	3.9	1889	271	14.3	9	5	3	5
Northeastern	702	77	11.0	279	64	22.9	2	0	0.0	983	141	14.3	•	20	33	24
U Florida	712	111	15.6	232	27	11.6	66	3	4.5	1010	141	14.0	36	33	27	16
Drexel University	505	71	14.1	203	29	14.3	24	1	4.2	732	101	13.8			\	19
U Minnesota	725	107	14.8	121	13	10.7	58	1	1.7	904	121	13.4				▮
U Arizona	550	63	11.5	203	35	17.2	30	1	3.3	783	99	12.6	•	~	42	38
U Wisconsin-Madison	809	112	13.8	277	33	11.9	85	3	3.5	1171	148	12.6	•	20	33	25
Arizona State U	549	68	12.4	180	24	13.3	21	0	0.0	750	92	12.3				▮
U Texas-Austin	815	101	12.4	313	35	11.2	92	0	0.0	1220	136	11.1	18	~	17	12
Iowa State University	839	92	11.0	90	7	7.8	55	0	0.0	984	99	10.1	25	34	46	43
TOTAL TOP 50 SCHOOLS	32864	5801	17.7	12374	1856	15.0	2800	185	6.6	48038	7842	16.3				
TOTAL ALL SCHOOLS	75735	11675	15.4	24290	3119	12.8	4175	296	7.1	104200	15090	14.5				

+ Includes Professional Degrees in Engineering. • Below 43rd in 1980. ~ Below 37th in 1982. \ Below 50th in 1984.

▮ Below 81th in 1986.

FIELD: Engineering

SOURCE: Engineering and Technology Degrees, 1988, Engineering Manpower Commission

TABLE 7-19

LEADING SCHOOLS* IN PERCENT OF ENGINEERING DEGREES AWARDED TO WOMEN, 1988

	Bachelors			Masters+			Doctorates			All Degrees		
School	Total	Women	%W	Total	Women	%W	Total	Women	%W	Total	Women	%W
U Alabama	97	51	52.6	67	4	6.0	9	0	0.0	173	55	31.8
Tufts Univeresity	186	48	25.8	67	18	26.9	0	0	0.0	253	66	26.1
Lawrence Inst of Tech	469	118	25.2	0	0	0.0	0	0	0.0	469	118	25.2
GMI Engrg & Mgmt Inst	448	111	24.8	0	0	0.0	0	0	0.0	448	111	24.8
Boston University	383	93	24.3	142	30	21.1	0	0	0.0	525	123	23.4
U Puerto Rico	521	114	21.9	10	2	20.0	0	0	0.0	531	116	21.8
Northwestern Univ	275	73	26.5	179	38	21.2	81	5	6.2	535	116	21.7
Johns Hopkins Univ	179	30	16.8	518	125	24.1	30	2	6.7	727	157	21.6
U Virginia	304	71	23.4	178	37	20.8	47	4	8.5	529	112	21.2
U Alabama-Huntsville	248	55	22.2	42	6	14.3	4	1	25.0	294	62	21.1
U Delaware	219	50	22.8	56	13	23.2	38	3	7.9	313	66	21.1
U Cal-San Diego	348	78	22.4	74	14	18.9	76	13	17.1	498	105	21.1
U Cal-Berkely	768	161	21.0	436	108	24.8	200	20	10.0	1404	289	20.6
Cornell Univ	538	132	24.5	382	63	16.5	116	13	11.2	1036	208	20.1
Columbia Univ	258	55	21.3	296	59	19.9	53	6	11.3	607	120	19.8
Colorado Sch of Mines	325	77	23.7	135	17	12.6	33	2	6.1	493	96	19.5
Michigan State U	562	129	23.0	127	9	7.1	35	2	5.7	724	140	19.3
San Jose State Univ	327	57	17.4	181	40	22.1	0	0	0.0	508	97	19.1
Marquette University	361	72	19.9	64	9	14.1	7	1	14.3	432	82	19.0
Cal State U-Long Bch	762	150	19.7	116	16	13.8	0	0	0.0	878	166	18.9
U Cal-Davis	319	63	19.7	138	30	21.7	42	1	2.4	499	94	18.8
Virginia Poly Inst	1041	223	21.4	344	42	12.2	83	6	7.2	1468	271	18.5
Worcester Poly Inst	500	99	19.8	91	10	11.0	5	0	0.0	596	109	18.3
U Iowa	242	49	20.2	96	19	19.8	36	0	0.0	374	68	18.2
Lehigh University	406	75	18.5	159	31	19.5	49	5	10.2	614	111	18.1
Cangegie Mellon Univ	286	56	19.6	135	21	15.6	48	7	14.6	469	84	17.9
U Maryland	720	137	19.0	183	27	14.8	39	4	10.3	942	168	17.8
U Mass-Amherst	396	74	18.7	160	25	15.6	34	6	17.6	590	105	17.8
Georgia Inst of Tech	1061	197	18.6	509	84	16.5	63	6	9.5	1633	287	17.6
Rutgers University	520	105	20.2	149	16	10.7	22	0	0.0	691	121	17.5
Stanford Univ	356	84	23.6	869	146	16.8	185	13	7.0	1410	243	17.2
Auburn University	654	122	18.7	82	6	7.3	23	1	4.3	759	129	17.0
NC State U-Raleigh	908	175	19.3	244	31	12.7	72	2	2.8	1224	208	17.0
Mass Inst of Tech	677	155	22.9	640	89	13.9	247	20	8.1	1564	264	16.9
Purdue U-W Lafayette	1189	209	17.6	425	63	14.8	120	10	8.3	1734	282	16.3
Michigan Tech Univ	761	124	16.3	82	13	15.9	9	1	11.1	852	138	16.2
U Colorado-Boulder	492	76	15.4	261	49	18.8	32	0	0.0	785	125	15.9
U Cal-Los Angeles	327	73	22.3	222	22	9.9	79	3	3.8	628	98	15.6
U Washington	644	111	17.2	213	28	13.1	45	0	0.0	902	139	15.4
U Pittsburgh	426	72	16.9	162	17	10.5	26	4	15.4	614	93	15.1
TOTAL TOP 40 SCHOOLS	19503	4004	20.5	8234	1377	16.7	1988	161	8.1	29725	5542	18.6
TOTAL ALL SCHOOLS	71386	10940	15.3	25440	3365	13.2	4571	313	6.8	101397	14618	14.4

+ Includes Professional Degrees in Engineering. * Of those that graduated 49 or more BS degrees to women.

SOURCE: Engineering and Technology Degrees, 1980 through 1987, Engineering Manpower Commission

TABLE 7-20

ENGINEERING SCHOOLS RANKED BY BS DEGREE AWARDS TO MINORITIES, 1987

School	Total Degrees	Black	His-panic+	Indian	Sub T Min	% Sub	Asian Pac. Is	Total Minority	Percent Minority	Total Min. Rank in 1980	1982	1984	1986
U Cal-Berkeley	830	19	24	0	43	5.2	286	329	39.6	1	1	1	1
Cal State U-Long Beac	605	21	35	4	60	9.9	173	233	38.5	*	23	13	2
CCNY	368	70	46	0	116	31.5	101	217	59.0	2	2	5	5
U Cal-Los Angeles	371	8	27	0	35	9.4	165	200	53.9	20	13	3	11
Cal Poly-Pomona	465	11	28	5	44	9.5	136	180	38.7	*	6	7	3
San Jose State U	356	6	13	3	22	6.2	155	177	49.7	27	-	2	16
Polytech U NY	463	28	19	0	47	10.2	128	175	37.8	*	16	8	7
U of Hawaii	210	0	0	0	0	0.0	166	166	79.0	*	3	9	6
U Southern California	489	11	23	1	35	7.2	126	161	32.9	13	-	43	4
U Illinois-Champaign	1241	19	10	1	30	2.4	107	137	11.0	7	12	14	9
Howard U	136	129	0	0	129	94.9	5	134	98.5	26	22	27	178
U Washington (3)	672	6	6	4	16	2.4	117	133	19.8	22	9	12	14
Georgia Inst of Tech	1083	51	27	1	79	7.3	49	128	11.8	15	4	6	8
Cal State U-LA	224	4	27	1	32	14.3	95	127	56.7	*	-	41	21
Mass Inst of Tech (1)	728	34	14	2	50	6.9	75	125	17.2	19	11	10	12
Texas A&M U	1541	18	79	1	98	6.4	20	118	7.7	*	31	33	13
U Maryland	742	22	13	1	36	4.9	82	118	15.9			\	25
New Jersey Inst Tech	490	24	39	0	63	12.9	47	110	22.4				#
U of Miami, FL	235	8	24	0	32	13.6	78	110	46.8	25	26	29	15
U Texas-Austin	815	7	53	2	62	7.6	46	108	13.3	5	7	4	10
Cal Poly-San Luis Ob	521	2	16	7	25	4.8	82	107	20.5	*	-	16	44
Purdue U-W Lafayette	1271	35	21	1	57	4.5	44	101	7.9	*	19	20	43
U District of Columbi	111	87	3	0	90	81.1	9	99	89.2	*	-	44	56
San Diego State U	390	3	21	2	26	6.7	72	98	25.1	*	-	31	45
U Cal-San Diego	344	0	10	1	11	3.2	87	98	28.5			\	19
Stanford	341	29	34	2	65	19.1	32	97	28.4	23	29	26	33
U Houston	255	5	7	0	12	4.7	46	44	17.3			\	47
NC State U-Raleigh	906	58	5	4	67	7.4	26	93	10.3	*	-	24	23
NM State Univ	276	2	61	4	67	24.3	5	93	33.7	*	36	62	50
Rutgers U	543	15	20	0	35	6.4	56	91	16.8	*	-	49	35
Prairie View A&M U	108	86	1	0	87	80.6	2	89	82.4	15	5	15	27
NC A&T State Univ	139	87	0	0	87	62.6	1	88	63.3	12	-	40	29
Cornell	531	17	21	2	40	7.5	48	88	16.6	*	17	19	22
U Cal-Santa Barbara	285	6	20	1	27	9.5	59	86	30.2	*	-	48	30
Cal State U-Northridg	303	11	26	1	38	12.5	45	83	27.4			\	37
Virginia Poly Inst	954	17	3	0	20	2.1	62	82	8.6	*	32	34	34
Columbia U	255	7	10	2	19	7.5	58	77	30.2	*	-	18	17
U Florida	712	15	38	1	54	7.6	22	76	10.7	19	25	30	20
Northwestern U	336	26	2	0	28	8.3	47	75	22.3	*	34	52	54
U Cal-Davis (2)	315	4	12	2	18	5.7	57	75	23.8	11	18	22	39
TOTAL ABOVE SCHOOLS	20960	1008	838	56	1902	9.1	3017	4919	23.5				
TOTAL ALL SCHOOLS+	75735	2182	2356	149	4687	6.2	5056	9743	12.9				

+Excludes U of Puerto Rico which had 369 graduates. * Below 27th in 1980. - Below 39th in 1982.
\ Below 57th in 1984. # Below 50 in 1986.
(1) Minority data estimated from ratios of 1986 data. (2) 1986 data. (3) Asian data estimated from 1986 report.

FIELD: Engineering

SOURCE: Engineering and Technology Degrees, 1987, Engineering Manpower Commission

TABLE 7-21

ENGINEERING SCHOOLS WITH HIGHEST PERCENTAGE OF NON-ASIAN MINORITIES AMONG BS GRADUATES, 1987

School	Total Degrees	Black	His-panic+	Indian	Sub T Min	% Sub	Asian/ Pac. Is	Total Minority	Percent Minority
Howard U	136	129	0	0	129	94.9	5	134	98.5
U District of Columbi	111	87	3	0	90	81.1	9	99	89.2
Prairie View A&M U	108	86	1	0	87	80.6	2	89	82.4
Tuskegee	82	53	0	0	53	64.6	0	53	64.6
NC A&T State Univ	139	87	0	0	87	62.6	1	88	63.3
Tennessee State Univ	64	38	0	0	38	59.4	0	38	59.4
Florida Intl Univ	113	4	50	0	54	47.8	10	64	56.6
Southern U	184	74	0	0	74	40.2	0	74	40.2
Texas A&I University	163	0	56	0	56	34.4	3	59	36.2
CCNY	368	70	46	0	116	31.5	101	217	59.0
U Texas-El Paso	186	0	57	0	57	30.6	3	60	32.3
Pratt Institute	160	34	13	0	47	29.4	26	73	45.6
NM State Univ	276	2	61	4	67	24.3	5	93	33.7
U New Mexico	292	1	56	4	61	20.9	4	65	22.3
Stanford	341	29	34	2	65	19.1	32	97	28.4
Cal State U-LA	224	4	27	1	32	14.3	95	127	56.7
U of Miami, FL	235	8	24	0	32	13.6	78	110	46.8
U South Florida	442	9	47	1	57	12.9	0	57	12.9
New Jersey Inst Tech	490	24	39	0	63	12.9	47	110	22.4
Cal State U-Northridg	303	11	26	1	38	12.5	45	83	27.4
Illinois I of Tech(2)	302	23	9	0	32	10.6	42	74	24.5
Polytech U NY	463	28	19	0	47	10.2	128	175	37.8
Cal State U-Long Beac	605	21	35	4	60	9.9	173	233	38.5
U Alabama	336	31	2	0	33	9.8	10	43	12.8
U Cal-Santa Barbara	285	6	20	1	27	9.5	59	86	30.2
Cal Poly-Pomona	465	11	28	5	44	9.5	136	180	38.7
U Cal-Los Angeles	371	8	27	0	35	9.4	165	200	53.9
Northwestern U	336	26	2	0	28	8.3	47	75	22.3
U Texas-Austin	815	7	53	2	62	7.6	46	108	13.3
U Florida	712	15	38	1	54	7.6	22	76	10.7
Cornell	531	17	21	2	40	7.5	48	88	16.6
Columbia U	255	7	10	2	19	7.5	58	77	30.2
NC State U-Raleigh	906	58	5	4	67	7.4	26	93	10.3
Georgia Inst of Tech	1083	51	27	1	79	7.3	49	128	11.8
U Southern California	489	11	23	1	35	7.2	126	161	32.9
Mass Inst of Tech (1)	728	34	14	2	50	6.9	75	125	17.2
San Diego State U	390	3	21	2	26	6.7	72	98	25.1
Rutgers U	543	15	20	0	35	6.4	56	91	16.8
U Tennessee-Knoxville	563	33	3	0	36	6.4	13	49	8.7
Texas A&M U	1541	18	79	1	98	6.4	20	118	7.7
TOTAL ABOVE SCHOOLS	16136	1173	996	41	2210	13.7	1837	4068	25.2
TOTAL ALL SCHOOLS+	75735	2182	2356	149	4687	6.2	5056	9743	12.9

+Excludes U of Puerto Rico which had 369 graduates.

(1) Minority data estimated from ratios of 1986 data. (2) 1986 data.

FIELD: Engineering

SOURCE: Engineering and Technology Degrees, 1980 through 1988, Engineering Manpower Commission

TABLE 7-22

50 LEADING ENGINEERING SCHOOLS IN BACHELOR'S DEGREE AWARDS TO MINORITIES, 1988

School	Total Degrees	Black	Hispanic+	Indian	Sub T Min	% Sub T	Asian Pac. Is	Total Min	% Min	Rank in 1980	1982	1984	1987
Cal State U-Long Beach	605	25	49	5	79	13.1	289	368	60.8	♦	23	13	2
U Cal-Berkeley	830	19	30	1	50	6.0	318	368	44.3	1	1	1	1
U of Hawaii	245	0	0	0	0	0.0	230	230	93.9	♦	3	9	6
CCNY	368	74	42	0	116	31.5	87	203	55.2	2	2	5	5
Polytech U NY	463	27	21	0	48	10.4	128	176	38.0	♦	16	8	7
Mass Inst of Tech	728	28	33	1	62	8.5	109	171	23.5	19	11	10	12
U of Washington	672	11	11	4	26	3.9	137	163	24.3	22	9	12	14
U Maryland	742	33	16	2	51	6.9	110	161	21.7			\	25
Texas A&M U	1541	10	77	4	91	5.9	62	153	9.9	♦	31	33	13
NM State Univ	276	3	65	7	75	27.2	3	137	49.6	♦	36	42	50
San Jose State U	356	4	6	3	13	3.7	133	146	41.0	27	ˋ	2	16
Georgia Inst of Tech	1083	68	23	1	92	8.5	53	145	13.4	15	4	6	8
U Cal-Los Angeles	371	4	19	0	23	6.2	121	144	38.8	20	13	3	11
U of Miami, FL	235	6	64	0	70	29.8	73	143	60.9	25	26	29	15
U Illinois-Champaign	1241	18	13	1	32	2.6	107	139	11.2	7	12	14	9
Cal Poly-San Luis Ob	521	2	28	4	34	6.5	98	132	25.3	♦	ˋ	16	44
U Texas-Austin	815	7	64	0	71	8.7	59	130	16.0	5	7	4	10
Purdue U-W Lafayette	1271	52	20	0	72	5.7	52	124	9.8	♦	19	20	43
Cornell	531	27	28	1	56	10.5	65	121	22.8	♦	17	19	22
U Cal-San Diego	344	1	13	0	14	4.1	102	116	33.7			\	19
NC A&T State Univ	139	112	0	0	112	80.6	2	114	82.0	12	ˋ	40	29
Rutgers U	543	20	18	0	38	7.0	76	114	21.0	♦	ˋ	49	35
Cal State U-Northbridge	303	18	28	1	47	15.5	58	105	34.7			\	37
New Jersey Inst Tech	450	21	34	0	55	12.2	48	103	22.9				]
Stanford	341	22	33	1	56	16.4	42	98	28.7	23	29	26	33
Virginia Poly Inst	954	14	9	0	23	2.4	72	95	10.0	♦	32	34	34
Pratt Institute	160	37	18	0	55	34.4	38	93	58.1	21	21	51	26
Howard U	136	92	0	0	92	67.6	0	92	67.6	26	22	27	18
U Cal-Davis	315	4	15	0	19	6.0	73	92	29.2	11	18	22	39
San Diego State U	390	8	20	5	33	8.5	58	91	23.3	♦	ˋ	31	45
Cal State U-Los Ang	224	12	10	0	22	9.8	66	88	39.3	♦	ˋ	41	21
U Arizona	550	11	34	8	53	9.6	34	87	15.8			\	51
Cal State U-Fullerton	916	2	14	3	19	2.1	66	85	9.3				]
Tuskegee	89	83	0	0	83	93.3	0	83	93.3	♦	ˋ	25	31
NC State U-Raleigh	160	46	6	1	53	33.1	29	82	51.3				]
NC State U-Raleigh	906	46	5	1	52	5.7	29	81	8.9	♦	ˋ	24	23
Prairie Veiw A&M U	108	81	0	0	81	75.0	0	81	75.0	15	5	15	27
Cal State U-Sacramen	360	6	13	4	23	6.4	57	80	22.2				]
U Florida	712	9	48	0	57	8.0	23	80	11.2	19	25	30	20
U of Michigan	867	18	7	5	30	3.5	50	80	9.2	♦	ˋ	17	38
Ohio State U	1113	19	12	0	31	2.8	48	79	7.1	♦	ˋ	47	46
Southern U	184	75	3	0	78	42.4	0	78	42.4	10	27	38	52
Illinois Inst of Toch	302	22	10	0	32	10.6	45	77	25.5			\	41
U New Mexico	292	1	57	5	63	21.6	14	77	26.4	♦	38	45	28
U Texas-El Paso	186	1	72	0	73	39.2	3	76	40.9	16	15	21	32
Oregon State Univ	386	10	11	9	30	7.8	45	75	19.4				]
Rensselaer Polytech	659	12	21	0	33	5.0	39	78	11.8	♦	ˋ	23	49
U Houston	255	2	6	0	8	3.1	54	47	18.4			\	47
Northwestern U	336	29	1	1	31	9.2	38	69	20.5	♦	34	52	54
Florida Intl Univ	137	7	56	0	63	46.0	5	68	49.6				]
TOTAL ALL SCHOOLS+	71386	2211	1920	187	4318	6.0	5591	9909	13.9				

+Excludes U of Puerto Rico which had 521 grduates. ♦ Below 27th in 1980.

ˋBelow 39th in 1982. \ Below 57th in 1984.] Below 58th in 1987.

FIELD: Engineering

SOURCE: Engineering and Technology Degrees, 1988, Engineering Manpower Commission

TABLE 7-23

ENGINEERING SCHOOLS WITH HIGHEST PERCENT BLACKS EARNING BS DEGREES, 1988

School	Total Degrees	Blacks No.	%
Tuskegee	89	83	93.3
NC A&T State Univ	139	112	80.6
Prairie Veiw A&M U	108	81	75.0
Howard U	136	92	67.6
Southern U	184	75	40.8
NC State U-Raleigh	160	46	28.8
Pratt Institute	160	37	23.1
CCNY	368	74	20.1
U District of Columbia	111	19	17.1
U Alabama	249	26	10.4
Northwestern U	336	29	8.6
Illinois Inst of Tech	302	22	7.3
Miss State Univ	353	23	6.5
Stanford	341	22	6.5
Georgia Inst of Tech	1083	68	6.3
Cal State U-Northridge	303	18	5.9
Polytech U NY	463	27	5.8
Cal State U-Los Ang	224	12	5.4
U Tennessee-Knoxville	563	29	5.2
Florida Intl Univ	137	7	5.1
Cornell	531	27	5.1
NC State U-Raleigh	906	46	5.1
New Jersey Inst Tech	450	21	4.7
U Maryland	742	33	4.4
Cal State U-Long Beach	605	25	4.1
Purdue U-W Lafayette	1271	52	4.1
Mass Inst of Tech	728	28	3.8
Rutgers U	543	20	3.7
Columbia U	255	8	3.1
U Missouri-Rolla	887	25	2.8
SUNY-Stony Brook	188	5	2.7
Oregon State Univ	386	10	2.6
TOTAL ALL SCHOOLS	71386	2211	3.1

TABLE 7-24

ENGINEERING SCHOOLS WITH HIGHEST PERCENT HISPANICS EARNING BS DEGREES, 1988

School	Total Degrees	Hispanics No.	%
Florida Intl Univ	137	56	40.9
U Texas-El Paso	186	72	38.7
U of Miami, FL	235	64	27.2
NM State Univ	276	65	23.6
U New Mexico	292	57	19.5
Florida Atlantic U	153	21	13.7
CCNY	368	42	11.4
Pratt Institute	160	18	11.3
Stanford	341	33	9.7
Cal State U-Northridge	303	28	9.2
Cal State U-Long Beach	605	49	8.1
U Texas-Austin	815	64	7.9
San Francisco State U	104	8	7.7
New Jersey Inst Tech	450	34	7.6
U Florida	712	48	6.7
U Arizona	550	34	6.2
U South Florida	442	25	5.7
Cal Poly-San Luis Ob	521	28	5.4
Cornell	531	28	5.3
Stevens Inst ot Tech	268	14	5.2
San Diego State U	390	20	5.1
U Cal-Los Angeles	371	19	5.1
Manhattan College	357	18	5.0
Texas A&M U	1541	77	5.0
U Cal-Davis	315	15	4.8
Polytech U NY	463	21	4.5
Mass Inst of Tech	728	33	4.5
Cal State U-Los Ang	224	10	4.5
US Air Force Academy	359	15	4.2
Texas Tech Univ	325	13	4.0
U Cal-Santa Barbara	285	11	3.9
U Cal-San Diego	344	13	3.8
TOTAL ALL SCHOOLS+	70865	1920	2.7

+ Excludes U of Puerto Rico which had 521 graduates.

FIELD: Engineering

SOURCE: Digest of Education Statistics 1977-1988; Fall Enrollment in Colleges and Universities, 1980; Projections of Education Statistics to 1992-93, National Center for Education Statistics. Engineering Enrollments Series, Fall 1970-88, Engineering Manpower Commission

TABLE 7-25

ENGINEERING ENROLLMENTS RELATED TO HIGH SCHOOL GRADUATES, ENTERING FRESHMEN AND TOTAL ENROLLMENTS, BY SEX, SELECTED YEARS, 1970 - 1988

YEAR		HIGH SCHOOL GRADUATES		FIRST TIME ENROLLMENT				TOTAL ENROLLMENT				% of H.S. Grads Enrolled in College the Next October		Engineering as % of First Time Enrollment		Engineering as % of Total Enrollment	
				All Fields		Engineering		All Fields		Engineering							
		Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
1970	Number	1,433,000	1,463,000	983,794	796,325	70,204	1,457	5,043,642	3,497,245	314,313	4,682						
	% of Total	49.5	50.5	55.3	44.7	98.0	2.0	58.8	41.2	98.5	1.5	51.8		4.0		3.7	
	% of Same Sex											55.2	48.5	6.8	0.2	6.3	0.1
1973	Number	1,602,000	1,609,000	930,783	826,070	49,508	2,417	5,371,052	4,231,071	255,259	7,744						
	% of Total	49.9	50.1	53.0	47.0	95.3	4.7	55.9	44.1	97.1	2.9	56.6		3.0		2.7	
	% of Same Sex											50.1	43.4	4.7	0.3	4.7	0.2
1975	Number	1,541,000	1,599,000	991,914	918,211	68,613	6,730	6,148,997	5,035,862	292,955	19,923						
	% of Total	49.1	50.9	51.9	48.1	91.1	8.9	55.0	45.0	93.6	6.4	50.7		3.9		2.8	
	% of Same Sex											52.6	49.0	5.6	0.7	5.1	0.4
1977	Number	1,548,000	1,606,000	1,172,147	1,259,453	78,859	9,921	5,789,076	5,496,771	340,265	33,917						
	% of Total	49.1	50.9	48.2	51.8	88.8	10.2	51.3	48.7	90.9	9.1	50.6		3.6		3.3	
	% of Same Sex											52.2	49.3	6.7	0.8	5.9	0.6
1979	Number	1,531,800	1,602,400	1,194,534	1,343,585	89,693	14,031	5,682,877	5,887,022	383,876	49,575						
	% of Total	48.9	51.1	47.1	52.9	86.5	13.5	49.1	50.9	88.6	11.4	49.3		4.1		3.7	
	% of Same Sex											50.4	48.4	82.6	7.6	6.7	0.8
1980	Number	1,355,198	1,401,425	1,233,446	1,391,629	94,145	16,004	5,874,374	6,222,521	411,709	58,220						
	% of Total	49.2	50.8	47.0	53.0	85.5	14.5	48.6	51.4	87.6	12.4	49.3		4.2		3.8	
	% of Same Sex											46.7	51.8	7.6	1.2	7.0	0.9
1981	Number	1,339,922	1,384,642	1,217,680	1,377,741	97,042	18,238	5,975,056	6,396,616	431,202	66,790						
	% of Total	49.2	50.8	46.9	53.1	84.2	15.8	48.3	51.7	86.6	13.4	53.9		4.4		4.0	
	% of Same Sex											54.8	53.1	8.0	1.3	7.2	1.0
1982	Number	1,474,000	1,527,000	1,199,237	1,306,229	96,148	19,155	5,981,272	6,376,728	441,916	75,413						
	% of Total	49.1	50.9	47.9	52.1	83.4	16.6	48.4	51.6	85.4	14.6	50.6		4.6		4.2	
	% of Same Sex											49.0	52.1	8.0	1.5	7.4	1.2
1983	Number	1,451,000	1,465,000	1,159,049	1,284,654	90,949	18,689	6,023,725	6,440,936	452,804	79,441						
	% of Total	49.8	50.2	47.4	52.6	83.0	17.0	48.3	51.7	85.1	14.9	52.7		4.5		4.3	
	% of Same Sex											51.9	53.4	7.8	1.5	7.5	1.2
1985	Number	1,429,000*	1,583,000*	1,112,303	1,244,595	87,892	17,356	5,863,900	6,378,100	444,948	77,716						
	% of Total	49.1	50.9	47.6	52.4	83.5	16.5	47.9	52.1	85.9	14.1	55.2		4.5		4.3	
	% of Same Sex											56.0	54.5	89.2	7.9	7.5	1.2
1986	Number	1,286,000*	1,380,000*	1,075,736	1,216,486	86,188	17,037	5,818,450	6,428,605	438,273	78,096						
	% of Total	49.1	50.9	46.9	53.1	83.5	16.5	47.5	52.5	86.9	15.1	57.7		4.5		4.2	
	% of Same Sex											58.6	56.9	8.0	1.4	7.5	1.2
1987	Number	1,331,000*	1,455,000	1,045,000	1,169,000	84,083	15,155	5,885,445	6,615,353	428,880	74,196						
	% of Total	47.8	52.2	47.2	52.8	84.7	15.3	47.1	52.9	85.3	14.7	53.8		4.7		3.4	
	% of Same Sex											55.9	51.9	8.0	1.3	7.3	1.1
1988	Number					82,172	15,837	5,881,000	6,663,000	421,713	75,706						
	% of Total					83.8	16.2	46.9	53.1	84.9	15.2					4.0	
	% of Same Sex															7.2	1.1

*Estimated

FIELD: Engineering

SOURCE: Engineering and Technology Enrollments, 1975 through 1988, Engineering Manpower Commission

TABLE 7-26

NUMBER AND PERCENT OF WOMEN, MINORITIES AND FOREIGN NATIONALS ENROLLED IN ENGINEERING BY DEGREE LEVEL

	FULL TIME UNDERGRADUATE STUDENTS												GRADUATE STUDENTS			
YEAR	First Year		Second Year		Third Year		4&5th Year		Total		Part Time		Full Time		Part Time	
(Fall)	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
ALL STUDENTS																
1975	75,343	100	55,891	100	49,338	100	50,807	100	231,379	100	17,041	100	37,285	100	21,173	100
1976	82,250	100	63,003	100	56,835	100	55,747	100	257,835	100	19,844	100	36,479	100	26,842	100
1977	88,780	100	70,326	100	64,721	100	65,421	100	289,248	100	20,634	100	39,235	100	25,055	100
1978	98,805	100	72,150	100	69,816	100	73,466	100	314,237	100	22,843	100	38,381	100	24,133	100
1979	103,724	100	78,594	100	74,928	100	83,242	100	340,488	100	25,811	100	41,384	100	25,768	100
1980	110,149	100	84,982	100	80,024	100	89,962	100	365,117	100	32,227	100	44,335	100	23,250	100
1981	115,280	100	87,519	100	86,633	100	98,145	100	387,577	100	32,825	100	47,772	100	29,818	100
1982	115,303	100	89,785	100	90,541	100	107,761	100	403,390	100	31,940	100	50,410	100	31,589	100
1983	109,638	100	89,515	100	91,233	100	115,758	100	406,144	100	35,061	100	57,366	100	33,674	100
1984	105,249	100	83,946	100	85,509	100	115,931	100	390,635	100	34,864	100	57,277	100	35,888	100
1985	103,225	100	79,627	100	84,875	100	116,464	100	384,191	100	36,672	100	60,641	100	34,864	100
1986	99,238	100	76,195	100	80,386	100	113,701	100	369,520	100	38,137	100	37,333	100	39,863	100
1987	95,453	100	73,317	100	77,085	100	111,143	100	356,998	100	35,200	100	69,343	100	41,435	100
1988	98,009	100	71,030	100	73,761	100	103,369	100	346,169	100	39,243	100	69,226	100	42,781	100
WOMEN																
1975	6,730	8.9	4,197	7.5	2,862	5.8	2,063	4.1	15,852	6.9	1,628	9.6	1,585	4.3	858	4.1
1976	8,545	10.4	5,848	9.3	4,407	7.8	3,136	5.6	21,936	8.5	1,258	6.3	1,693	4.6	1,083	4.0
1977	9,921	11.2	7,537	10.7	6,193	9.6	5,122	7.8	28,773	9.9	1,192	5.8	2,661	6.8	1,291	5.2
1978	11,789	11.9	8,447	11.7	7,453	10.7	6,829	9.3	34,518	11.0	1,414	6.2	2,930	7.6	1,294	5.4
1979	14,031	13.5	10,400	13.2	8,853	11.8	8,743	10.5	42,027	12.3	2,404	9.3	3,409	8.2	1,735	6.7
1980	16,004	14.5	12,094	14.2	10,269	12.8	10,577	11.8	48,944	13.4	2,918	9.1	4,014	9.1	2,344	10.1
1981	18,238	15.8	13,285	15.2	12,023	13.9	12,503	12.7	56,049	14.5	3,220	9.8	4,627	9.7	2,894	9.7
1982	19,155	16.6	14,704	16.4	13,561	15.0	14,908	13.8	62,328	15.5	4,250	13.3	5,585	11.1	3,250	10.3
1983	18,689	17.0	15,143	16.9	14,019	15.4	16,798	14.5	64,649	15.9	4,182	11.9	6,506	11.3	4,104	12.2
1984	17,356	16.5	14,264	17.0	13,897	16.3	17,142	14.8	62,659	16.0	4,040	11.6	6,761	11.8	4,256	11.9
1985	17,037	16.5	13,288	16.7	13,523	15.9	17,754	15.2	61,602	16.0	4,650	12.7	7,401	12.2	4,443	12.7
1986	15,155	15.3	12,581	16.5	12,445	15.5	17,431	15.3	57,612	15.6	5,046	13.2	8,557	22.9	5,357	13.4
1987	15,004	15.7	11,820	16.1	11,775	15.3	16,872	15.2	55,471	15.5	4,810	13.7	8,079	11.7	5,836	14.1
1988	15,837	16.2	11,465	16.1	11,356	15.4	16,114	15.6	54,772	15.8	5,616	14.3	8,773	12.7	6,545	15.3
BLACKS																
1975	3,840	5.1	1,980	3.5	1,366	2.8	1,203	2.4	8,389	3.6	658	3.9	390	1.0	361	1.7
1976	4,372	5.3	2,483	3.9	1,633	2.9	1,340	2.4	9,828	3.8	632	3.2	427	1.2	332	1.2
1977	4,728	5.3	2,928	4.2	2,104	3.3	1,628	2.5	11,388	3.9	613	3.0	438	1.1	487	1.9
1978	5,493	5.6	3,103	4.3	2,330	3.3	2,028	2.8	12,954	4.1	726	3.2	450	1.2	393	1.6
1979	6,339	6.1	3,451	4.4	2,687	3.6	2,309	2.8	14,786	4.3	1,056	4.1	480	1.2	348	1.4
1980	6,661	6.0	3,963	4.7	2,903	3.6	2,654	3.0	16,181	4.4	1,425	4.4	588	1.3	399	1.7
1981	7,015	6.1	4,398	5.0	3,290	3.8	2,908	3.0	17,611	4.5	1,300	4.0	553	1.2	506	1.7
1982	6,715	5.8	4,436	4.9	3,261	3.6	3,186	3.0	17,598	4.4	1,794	5.6	634	1.3	503	1.6
1983	6,342	5.8	4,314	4.8	3,487	3.8	3,674	3.2	17,817	4.4	1,891	5.4	803	1.4	673	2.0
1984	6,245	5.9	4,084	4.9	3,461	4.0	3,661	3.2	17,451	4.5	1,753	5.0	793	1.4	606	1.7
1985	6,374	6.2	3,942	5.0	3,604	4.2	4,074	3.5	17,994	4.7	1,825	5.0	845	1.4	578	1.7
1986	5,873	5.9	3,720	4.9	3,331	4.1	3,906	3.4	16,830	4.6	1,629	4.3	874	2.3	748	1.9
1987	6,145	6.4	3,777	5.2	3,298	4.3	4,080	3.7	17,300	4.8	1,842	5.2	791	1.1	888	2.1
1988	7,075	7.2	3,911	5.5	3,357	4.6	3,884	3.8	18,227	5.3	2,178	5.6	866	1.3	899	2.1

FIELD: Engineering

SOURCE: Engineering and Technology Enrollments, 1975 through 1988, Engineering Manpower Commission

TABLE 7-26 (continued)

NUMBER AND PERCENT OF WOMEN, MINORITIES AND FOREIGN NATIONALS ENROLLED IN ENGINEERING BY DEGREE LEVEL

	FULL TIME UNDERGRADUATE STUDENTS												GRADUATE STUDENTS			
YEAR	First Year		Second Year		Third Year		4&5th Year		Total[1]		Part Time		Full Time		Part Time	
(Fall)	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
HISPANICS*																
1978	3,296	3.3	2,078	2.9	1,930	2.8	2,527	3.4	9,831	3.1	570	2.5	426	1.1	312	1.3
1979	3,768	3.6	2,354	3.0	2,230	3.0	2,775	3.3	11,127	3.3	941	3.6	472	1.1	381	1.5
1980	4,208	3.8	2,543	3.0	2,282	2.9	2,827	3.1	11,860	3.2	1,045	3.2	476	1.1	403	1.7
1981	4,768	4.1	2,976	3.4	2,598	3.0	3,273	3.3	13,615	3.5	744	2.3	595	1.2	408	1.4
1982	4,421	3.8	3,106	3.5	2,928	3.2	3,580	3.3	14,035	3.5	1,141	3.6	564	1.1	400	1.3
1983	4,760	4.3	3,251	3.6	3,113	3.4	4,058	3.5	15,182	3.7	1,280	3.7	731	1.3	510	1.5
1984	4,814	4.6	3,290	3.9	3,335	3.9	4,346	3.7	15,785	4.0	1,300	3.7	764	1.3	548	1.5
1985	4,789	4.6	3,500	4.4	3,527	4.2	5,484	4.7	17,300	4.5	1,298	3.5	1,058	1.7	644	1.8
1986	4,299	4.3	3,221	4.2	3,389	4.2	5,363	4.7	16,272	4.4	1,314	3.4	980	2.6	622	1.6
1987	4,465	4.7	3,424	4.7	3,396	4.4	5,846	5.3	17,131	4.8	1,122	3.2	1,132	1.6	700	1.7
1988	4,872	5.0	3,221	4.5	3,315	4.5	5,619	5.4	17,027	4.9	1,673	4.3	1,062	1.5	697	1.6
ASIAN AMERICANS																
1978	2,169	2.2	2,006	2.8	2,200	3.2	2,265	3.1	8,640	2.7	377	1.7	1,533	4.0	973	4.0
1979	3,133	3.0	2,578	3.3	2,800	3.7	2,966	3.6	11,477	3.4	772	3.0	1,603	3.9	1,033	4.0
1980	2,889	2.6	2,791	3.3	2,746	3.4	3,253	3.6	11,679	3.2	1,093	3.4	1,657	3.7	1,453	6.2
1981	4,035	3.5	3,247	3.7	3,381	3.9	3,799	3.9	14,462	3.7	1,353	4.1	2,217	4.6	1,591	5.3
1982	4,098	3.6	3,492	3.9	3,800	4.2	4,299	4.0	15,689	3.9	1,562	4.9	2,531	5.0	1,434	4.5
1983	4,983	4.5	4,452	5.0	5,201	5.7	6,046	5.2	20,682	5.1	2,325	6.6	3,636	6.3	2,333	6.9
1984	5,614	5.3	4,901	5.8	5,951	7.0	7,147	6.2	23,613	6.0	1,836	5.3	3,280	5.7	2,322	6.5
1985	6,566	6.4	5,233	6.6	6,336	7.5	8,403	7.2	26,538	6.9	2,229	6.1	4,166	6.9	2,456	7.0
1986	6,459	6.5	5,365	7.0	6,462	8.0	8,726	7.7	27,012	7.3	3,189	8.4	3,997	10.7	3,234	8.1
1987	7,074	7.4	6,015	8.2	6,984	9.1	10,057	9.0	30,130	8.4	2,665	7.6	4,315	6.2	3,590	8.7
1988	7,510	7.7	6,174	8.7	7,101	9.6	9,567	9.3	30,352	8.8	3,699	9.4	4,664	6.7	3,645	8.5
AMERICAN INDIANS																
1978	225	0.2	161	0.2	121	0.2	118	0.2	625	0.2	59	0.3	34	0.1	31	0.1
1979	317	0.3	146	0.2	152	0.2	144	0.2	759	0.2	60	0.2	57	0.1	17	0.1
1980	365	0.3	187	0.2	174	0.2	177	0.2	903	0.2	117	0.4	45	0.1	63	0.3
1981	412	0.4	189	0.2	176	0.2	193	0.2	970	0.3	113	0.3	42	0.1	53	0.2
1982	371	0.3	266	0.3	205	0.2	236	0.2	1,078	0.3	145	0.5	89	0.2	64	0.2
1983	376	0.3	239	0.3	236	0.3	276	0.2	1,127	0.3	145	0.4	53	0.1	60	0.2
1984	410	0.4	241	0.3	232	0.3	303	0.3	1,186	0.3	92	0.3	73	0.1	51	0.1
1985	365	0.4	246	0.3	221	0.3	288	0.2	1,120	0.3	120	0.3	72	0.1	54	0.2
1986	353	0.4	201	0.3	216	0.3	301	0.3	1,071	0.3	124	0.3	71	0.2	52	0.1
1987	354	0.4	215	0.3	228	0.3	353	0.3	1,150	0.3	109	0.3	91	0.1	56	0.1
1988	433	0.4	209	0.3	212	0.3	310	0.3	1,164	0.3	120	0.3	101	0.1	70	0.2
FOREIGN NATIONALS																
1979	4,984	4.8	4,771	6.1	5,583	7.5	6,298	7.6	21,636	6.4	1,125	4.4	14,061	34.0	1,555	6.0
1980	5,095	4.6	5,436	6.4	6,496	8.1	7,627	8.5	24,654	6.8	1,474	4.6	16,120	36.4	2,690	11.6
1981	4,974	4.3	5,611	6.4	6,831	7.9	7,951	8.1	25,367	6.5	1,218	3.7	17,985	37.6	2,577	8.6
1982	4,925	4.3	5,148	5.7	6,176	6.8	7,358	6.8	23,607	5.9	1,443	4.5	17,651	35.0	2,670	8.5
1983	5,234	4.8	5,161	5.8	6,194	6.8	8,394	7.3	24,983	6.2	1,454	4.1	20,110	35.1	3,530	10.5
1984	4,850	4.6	5,478	6.5	6,211	7.3	8,275	7.1	24,814	6.4	1,305	3.7	20,294	35.4	3,579	10.0
1985	5,282	5.1	5,553	7.0	6,756	8.0	9,464	8.1	27,055	7.0	1,536	4.2	21,953	36.2	3,622	10.4
1986	4,154	4.2	4,864	6.4	5,586	6.9	8,143	7.2	22,747	6.2	1,608	4.2	24,864	66.6	4,437	11.1
1987	3,930	4.1	4,402	6.0	5,638	7.3	8,263	7.4	22,233	6.2	1,781	5.1	26,948	38.9	5,221	12.6
1988	3,848	3.9	3,817	5.4	5,148	7.0	7,922	7.7	20,735	6.0	1,822	4.6	29,557	42.7	5,871	13.7

* Includes enrollment at the University of Puerto Rico.

SOURCE: Engineering and Technology Enrollments, Fall 1987, Engineering Manpower Commission

TABLE 7-27

NUMBER AND PERCENT OF WOMEN AND MINORITIES ENROLLED FULL TIME BY CURRICULUM AND LEVEL, FALL 1987

Curriculum	Total All Students		Women		Black		Hispanic		Asian/ Pacific		American Indian		Foreign	
	UG	Grad	UG	Grad	UG	Grad	UG	Grad	UG	Grad	UG	Grad	UG	Grad
Aerospace	17651	2364	1922	156	490	21	698	30	1055	133	49	4	557	778
Agricultural	1452	766	127	63	20	7	34	4	32	11	7	0	76	314
Architectural	2397	47	440	2	319	2	64	0	72	1	6	0	204	22
Biomedical	3506	1171	1079	284	132	16	139	11	444	73	4	2	176	295
Ceramic	1220	373	300	75	44	1	22	6	64	14	0	0	35	136
Chemical	18557	5636	5263	845	1011	60	1265	119	971	338	55	10	890	2032
Civil	32577	7672	4788	913	1182	75	2346	168	1762	341	135	10	2661	3743
Computer	19060	6573	3737	1091	1059	74	1146	86	2262	516	93	7	1695	2127
Electrical	104634	19147	13224	1727	6279	274	4987	314	13278	1535	280	22	8332	7332
Engineering Science	4710	1860	859	241	131	17	109	19	292	119	19	1	170	629
Environmental	625	1021	182	218	6	6	10	16	9	32	3	1	12	263
General	10931	787	1705	92	535	19	720	11	1144	55	42	2	558	161
Industrial	15869	3871	4499	583	949	57	1226	88	909	198	35	8	1269	1677
Marine	2472	459	169	36	41	1	90	7	63	8	2	0	106	188
Materials	3089	3000	676	469	73	14	113	30	219	139	6	3	105	1276
Mechanical	65952	10769	7248	773	2631	95	2857	154	4077	657	240	13	3319	4602
Mining	1108	883	230	124	6	4	17	29	22	25	7	4	125	318
Nuclear	1621	1057	191	98	42	10	76	15	91	47	6	1	45	420
Petroleum	1669	557	175	26	21	1	74	10	41	12	11	0	271	249
Systems	1404	988	299	187	63	33	44	12	119	52	2	3	127	307
All Other	46494	342	8358	76	2266	4	1094	3	3204	9	134	0	1499	79
TOTAL	356,998	69,343	55,471	8,079	17,300	791	17,131	1,132	30,130	4,315	1,136	91	22,232	26,948
							PERCENT							
Aerospace	100	100	10.9	6.6	2.8	0.9	4.0	1.3	6.0	5.6	0.3	0.2	3.2	32.9
Agricultural	100	100	8.7	8.2	1.4	0.9	2.3	0.5	2.2	1.4	0.5	0.0	5.2	41.0
Architectural	100	100	18.4	4.3	13.3	4.3	2.7	0.0	3.0	2.1	0.3	0.0	8.5	46.8
Biomedical	100	100	30.8	24.3	3.8	1.4	4.0	0.9	12.7	6.2	0.1	0.2	5.0	25.2
Ceramic	100	100	24.6	20.1	3.6	0.3	1.8	1.6	5.2	3.8	0.0	0.0	2.9	36.5
Chemical	100	100	28.4	15.0	5.4	1.1	6.8	2.1	5.2	6.0	0.3	0.2	4.8	36.1
Civil	100	100	14.7	11.9	3.6	1.0	7.2	2.2	5.4	4.4	0.4	0.1	8.2	48.8
Computer	100	100	19.6	16.6	5.6	1.1	6.0	1.3	11.9	7.9	0.5	0.1	8.9	32.4
Electrical	100	100	12.6	9.0	6.0	1.4	4.8	1.6	12.7	8.0	0.3	0.1	8.0	38.3
Engineering Science	100	100	18.2	13.0	2.8	0.9	2.3	1.0	6.2	6.4	0.4	0.1	3.6	33.8
Environmental	100	100	29.1	21.4	1.0	0.6	1.6	1.6	1.4	3.1	0.5	0.1	1.9	25.8
General	100	100	15.6	11.7	4.9	2.4	6.6	1.4	10.5	7.0	0.4	0.3	5.1	20.5
Industrial	100	100	28.4	15.1	6.0	1.5	7.7	2.3	5.7	5.1	0.2	0.2	8.0	43.3
Marine	100	100	6.8	7.8	1.7	0.2	3.6	1.5	2.5	1.7	0.1	0.0	4.3	41.0
Materials	100	100	21.9	15.6	2.4	0.5	3.7	1.0	7.1	4.6	0.2	0.1	3.4	42.5
Mechanical	100	100	11.0	7.2	4.0	0.9	4.3	1.4	6.2	6.1	0.4	0.1	5.0	42.7
Mining	100	100	20.8	14.0	0.5	0.5	1.5	3.3	2.0	2.8	0.6	0.5	11.3	36.0
Nuclear	100	100	11.8	9.3	2.6	0.9	4.7	1.4	5.6	4.4	0.4	0.1	2.8	39.7
Petroleum	100	100	10.5	4.7	1.3	0.2	4.4	1.8	2.5	2.2	0.7	0.0	16.2	44.7
Systems	100	100	21.3	18.9	4.5	3.3	3.1	1.2	8.5	5.3	0.1	0.3	9.0	31.1
All Other	100	100	18.0	22.2	4.9	1.2	2.4	0.9	6.9	2.6	0.3	0.0	3.2	23.1
TOTAL	100	100	15.5	11.7	4.8	1.1	4.8	1.6	8.4	6.2	0.3	0.1	6.2	38.9

FIELD: Nuclear Engineering

SOURCE: Nuclear Engineering Enrollments and Degrees, 1987, U.S. Department of Energy, (DOE/ER-0370) and Manpower Assessment Brief No. 8, March 1989

TABLE 7-28

ENROLLMENTS AND DEGREES IN NUCLEAR ENGINEERING BY SEX, MINORITY GROUP AND LEVEL, 1981-88

Sex, Minority Group & Year	TOTAL ENROLLMENTS (FALL TERM)								DEGREES YEAR ENDING JUNE 30					
	Undergraduate				Graduate									
	Junior		Senior		Master's		Ph.D.		Bachelor'		Master's		Ph.D.	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL														
1981	724	100	808	100	876	100	577	100	692	100	315	100	132	100
1982	765	100	925	100	946	100	606	100	681	100	342	100	127	100
1983	832	100	869	100	951	100	564	100	654	100	325	100	124	100
1984	714	100	929	100	924	100	559	100	660	100	316	100	132	100
1985	684	100	816	100	835	100	582	100	612	100	306	100	113	100
1986	639	100	705	100	806	100	549	100	572	100	283	100	120	100
1987	606	100	701	100	793	100	613	100	509	100	295	100	97	100
1988					750	100	647	100	484	100	232	100	114	100
WOMEN														
1981	65	9.0	57	7.1	55	6.3	26	4.5	46	6.6	22	7.0	6	4.5
1982	63	8.2	67	7.2	74	7.8	30	5.0	42	6.2	27	7.9	7	5.5
1983	63	7.6	74	8.5	64	6.7	31	5.5	45	6.9	18	5.5	6	4.8
1984	65	9.1	73	7.9	76	8.2	37	6.6	60	9.1	17	5.4	7	5.3
1985	79	11.5	62	7.6	79	9.5	40	6.9	61	10.0	20	6.5	5	4.4
1986	66	10.3	75	10.6	68	8.4	39	7.1	60	10.5	23	8.1	9	7.5
1987	58	9.6	76	10.8	117	14.8	51	8.3	55	10.8	32	10.8	4	4.1
1989					78	10.4	56	8.7		0.0		0.0		0.0
BLACKS														
1981	8	1.1	5	0.6	9	1.0	6	1.0	4	0.6	4	1.3	1	0.8
1982	9	1.2	3	0.3	12	1.3	6	1.0	7	1.0	5	1.5		
1983	8	1.0	10	1.2	7	0.7	7	1.2	3	0.5	1	0.3		
1984	5	0.7	8	0.9	6	0.6	9	1.6	4	0.6	1	0.3		
1985	14	2.0	8	1.0	13	1.6	5	0.9	3	0.5	1	0.3	3	2.7
1986	10	1.6	11	1.6	8	1.0	2	0.4	5	0.9	2	0.7	3	2.5
1987	10	1.7	11	1.6	5	0.6	4	0.7	8	1.6	3	1.0		
HISPANIC														
1981	14	1.9	14	1.7	10	1.1	10	1.7	8	1.2	8	2.5		
1982	15	2.0	16	1.7	8	0.8	6	1.0	8	1.2	3	0.9	1	0.8
1983	11	1.3	14	1.6	14	1.5	6	1.1	9	1.4	4	1.2	1	0.8
1984	3	0.4	7	0.8	16	1.7	3	0.5	11	1.7	5	1.6	1	0.8
1985	13	1.9	8	1.0	9	1.1	8	1.4	7	1.1	1	0.3		
1986	11	1.7	14	2.0	11	1.4	4	0.7	10	1.7	6	2.1	2	1.7
1987	16	2.6	22	3.1	9	1.1	5	0.8	8	1.6	3	1.0	1	1.0
ASIAN AMERICAN/PACIFIC ISLANDERS														
1981	8	1.1	12	1.5	18	2.1	14	2.4	8	1.2	5	1.6	3	2.3
1982	14	1.8	12	1.3	22	2.3	14	2.3	12	1.8	9	2.6	6	4.7
1983	13	1.6	13	1.5	25	2.6	18	3.2	11	1.7	7	2.2	3	2.4
1984	16	2.2	10	1.1	20	2.2	27	4.8	3	0.5	9	2.8	4	3.0
1985	19	2.8	22	2.7	8	1.0	14	2.4	4	0.7	11	3.6	3	2.7
1986	19	3.0	27	3.8	16	2.0	15	2.7	7	1.2	5	1.8	7	5.8
1987	17	2.8	24	3.4	29	3.7	24	3.9	12	2.4	4	1.4	3	3.1
FOREIGN NATIONAL														
1981	43	5.9	79	9.8	205	23.4	262	45.4	42	6.1	81	25.7	63	47.7
1982	44	5.8	82	8.9	279	29.5	275	45.4	56	8.2	84	24.6	55	43.3
1983	57	6.9	57	6.6	309	32.5	287	50.9	52	8.0	100	30.8	64	51.6
1984	44	6.2	76	8.2	256	27.7	257	46.0	43	6.5	123	38.9	59	44.7
1985	37	5.4	33	4.0	247	29.6	291	50.0	37	6.0	85	27.8	65	57.5
1986	36	5.6	31	4.4	222	27.5	233	42.4	26	4.5	86	30.4	63	52.5
1987	19	3.1	31	4.4	216	27.2	283	46.2	20	3.9	93	31.5	54	55.7
1988	13		15		207	27.6	332	51.3	21	4.3	107	46.1	56	49.1

FIELD: Health Physics

SOURCE: Health Physics/Radiation Protection Enrollments and Degrees, 1987, U.S. Department of Energy, (DOE/ER-0371) and Manpower Assessment Brief No. 8, March 1989

TABLE 7-29

ENROLMENTS AND DEGREES IN HEALTH PHYSICS/RADIATION PROTECTION BY SEX, MINORITY GROUP AND EDUCATION LEVEL, 1983 - 1988

Sex, Minority Group & Year	TOTAL ENROLLMENTS (FALL TERM)								DEGREES					
	Undergraduate				Graduate				YEAR ENDING JUNE 30					
	Junior		Senior		Master's		Ph.D.		Bachelor'		Master's		Ph.D.	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL														
1983	149	100	159	100	375	100	165	100	106	100	162	100	37	100
1984	171	100	157	100	622	100	163	100	113	100	180	100	43	100
1985	150	100	165	100	521	100	186	100	92	100	179	100	31	100
1986	122	100	116	100	494	100	220	100	125	100	171	100	25	100
1987	99	100	126	100	497	100	218	100	85	100	136	100	36	100
1988	82	100	91	100	462	100	203	100	71	100	146	100	28	100
WOMEN														
1983	48	32.2	54	34.0	121	32.3	34	20.6	25	23.6	51	31.5	4	10.8
1984	57	33.3	47	29.9	171	27.5	26	16.0	37	32.7	43	23.9	8	18.6
1985	56	37.3	56	33.9	159	30.5	32	17.2	33	35.9	31	17.3	8	25.8
1986	51	41.8	46	39.7	172	34.8	44	20.0	45	36.0	54	31.6	3	12.0
1987	34	34.3	47	37.3	139	28.0	51	23.4	30	35.3	44	32.4	5	13.9
1988	31	37.8	40	44.0	110	23.8	50	24.6	22	31.0	47	32.2	4	14.3
BLACKS														
1983	13	8.7	8	5.0	6	1.6	1	0.6	2	1.9	4	2.5		
1984	11	6.4	8	5.1	14	2.3	1	0.6	4	3.5	1	0.6		
1985	12	8.0	15	9.1	7	1.3			2	2.2	1	0.6		
1986	9	7.4	4	3.4	7	1.4	1	0.5	6	4.8	1	0.6		
1987	7	7.1	5	4.0	8	1.6	1	0.5	4	4.7	3	2.2		
1989	4	4.9	7	7.7	7	1.5	1	0.5	6	8.5				
HISPANIC														
1983	8	5.4	7	4.4	8	2.1	2	1.2	1	0.9	1	0.6	1	2.7
1984	10	5.8	4	2.5	11	1.8	2	1.2	3	2.7	5	2.8		
1985	3	2.0	10	6.1	12	2.3	3	1.6	4	4.3	6	3.4	1	3.2
1986	6	4.9			10	2.0	5	2.3	2	1.6	3	1.8		
1987	3	3.0	2	1.6	5	1.0	5	2.3			1	0.7		
1988	2	2.4	2	2.2	5	1.1	6	3.0	2		4	2.7	1	
ASIAN AMERICAN/PACIFIC ISLANDERS														
1983	1	0.7	1	0.6	8	2.1	9	5.5	1	0.9	7	4.3	1	2.7
1984	1	0.6	2	1.3	10	1.6	13	8.0	1	0.9	2	1.1	4	9.3
1985			1	0.6	11	2.1	11	5.9	1	1.1	3	1.7	1	3.2
1986	2	1.6	1	0.9	6	1.2	16	7.3	2	1.6	2	1.2	1	4.0
1987	1	1.0	3	2.4	13	2.6	15	6.9	1	1.2	6	4.4	2	5.6
1988	2	2.4	1	1.1	11	2.4	9	4.4	2	2.8	3	2.1	2	7.1
FOREIGN NATIONALS														
1983			3	1.9	60	16.0	36	21.8	3	2.8	20	12.3	6	16.2
1984	[illegible]	0.6	2	1.3	48	7.7	36	22.1	3	2.7	23	12.7	9	20.9
1985	1	0.7	1	0.6	40	7.7	54	29.0	2	2.2	32	17.9	10	32.3
1986	2	1.6	3	2.6	68	13.8	47	21.5	2	1.6	25	14.6	6	[illegible]
1987	1	1.0	3	2.4	53	10.7	66	30.3	2	2.4	18	13.2	9	[illegible]
1988			1	1.1	51	11.0	75	36.9	2	2.8	17	11.6	5	17.9

FIELD: Engineering

SOURCE: Engineering and Technology Degrees, 1987 through 1989, Engineering Manpower Commission

TABLE 7-30

BACHELORS DEGREES AWARDED IN ENGINEERING TECHNOLOGY BY CURRICULUM, SEX AND MINORITY GROUP, 1987 - 1989

CURRICULUM	TOTAL			WOMEN			BLACKS			HISPANICS			ASIAN AMERICANS			AMER INDS			FOREIGN NATS		
	1987	1988	1989	'87	'88	'89	'87	'88	'89	'87	'88	'89	'87	'88	'89	'87	'88	'89	'87	'88	'89
Aerospace & related	170	160	170	14	10	11	4	1	2	10	6	7	3	5	6	1	1	1	8	27	29
Air Cond/Heat/Refrig																					
Architectual	175	156	153	21	27	29	17	17	16	1	1	1			2				19	8	7
Automotive	8	10	38		1						1		2		3				1	4	
Chemical	20	31	22	1	4	3	1		1											2	1
Civil	614	597	588	44	53	48	29	43	33	15	22	24	20	7	14	6	1		67	52	56
Computer	314	401	414	60	50	99	23	24	30	3	4	5	10	22	20	1	1		11	18	18
Construction	464	433	448	23	20	17	17	14	21	6	10	8	7	4	5	1	6	2	15	15	18
Drafting/Design	232	199	172	17	22	24	1	2	4	2	6	3	9	3	2				4	6	1
Electrical	2090	2061	1885	112	93	95	131	123	91	30	27	21	77	77	57	8	5	7	71	63	47
Electromechanical	142	155	161	7		4	14	27	39	5	6	9	1	3	11			1	4	5	31
Electronic	3462	3148	3149	82	92	98	104	93	109	47	51	52	99	103	106	6	4	9	109	109	94
Engineering Science	5	9	7		2	1		1													
General Engineering	846	702	669	68	41	68	23	11	10	63	32	41	49	38	64	4	1	1	11	27	6
Industrial/Manuf	1393	1352	1327	146	150	132	45	76	72	21	26	21	20	17	18	2	2	1	30	32	36
Marine	63	107	74	5	6		1	6	23	1	4	2	3	1	1			1	7	2	1
Materials	2	5	7		1																
Mechanical	2016	1930	1796	81	98	72	93	70	64	26	32	22	64	39	38	1	6	6	102	77	63
Mining/Metall/Weld	51	31	32		5	1	2	1	1										4	3	
Nuclear		2	9											2							
Others	236	240	168	54	55	33	6	8	4	4	4	3	2	4					9	7	15
ALL STUDENTS*	12303	11729	11289	735	730	735	511	517	499	234	232	219	366	325	347	30	27	29	472	457	423

* Note: groups are neither all-inclusive nor mutually exclusive, and will not sum to totals.

SOURCE: Series of Earned Degrees Conferred, 1971-87, National Center for Education Statistics

TABLE 7-31

DEGREES IN ENGINEERING TECHNOLOGY BY SEX AND LEVEL OF DEGREE, 1970-71 THRU 1986-87

	BACHELOR'S			MASTER'S		
YEAR	Both Sexes	Women Only	% Women	Both Sexes	Women Only	% Women
1970-71	5,148	42	0.8	134	0	0.0
1971-72	5,772	46	0.8	237	1	0.4
1972-73	4,854	52	1.1	122	2	1.6
1973-74	7,456	105	1.4	209	9	4.3
1974-75	7,497	192	2.6	221	4	1.8
1975-76	7,943	165	2.1	328	14	4.3
1976-77	8,347	196	2.3	284	23	8.1
1977-78	8,787	246	2.8	360	25	6.9
1978-79	9,355	327	3.5	268	18	6.7
1979-80	10,491	490	4.7	339	20	5.9
1980-81	11,713	675	5.8	323	39	12.1
1981-82	12,984	875	6.7	413	55	13.3
1982-83	17,022	1,353	7.9	520	51	9.8
1983-84	18,712	1,467	7.8	567	61	10.8
1984-85	18,951	1,457	7.7	631	66	10.5
1985-86	19,620	1,532	7.8	602	97	16.1
1986-87	19,277	1,477	7.7	612	83	13.6
TOTALS	193,929	10,697	5.5	6,170	568	9.2

SOURCE: Engineering and Technology Degrees, 1986 through 1988, Engineering Manpower Commission

TABLE 7-32

BACHELORS DEGREES AWARDED IN ENGINEERING TECHNOLOGY BY CURRICULUM, SEX AND MINORITY GROUP 1986 - 1988

CURRICULUM	TOTAL			WOMEN			BLACKS			HISPANICS			ASIAN AMERICANS			AMER INDS			FOREIGN NATS		
	1986	1987	1988	'86	'87	'88	'86	'87	'88	'86	'87	'88	'86	'87	'88	'86	'87	'88	'86	'87	'88
Aerspace related	273	170	160	19	14	10	3	4	1	17	10	6	16	3	5	1	1	1	37	8	27
Air Cond/Heat/Refrig				0			0			0											
Architectual	164	175	156	30	21	27	14	17	17	3	1	1	1						9	19	8
Automotive	20	8	10	1		1	0			1		1		2					7	1	4
Chemical	20	20	31	2	1	4		1													2
Civil	648	614	597	51	44	53	41	29	43	17	15	22	11	20	7	1	6	1	75	67	52
Computer	222	314	401	51	60	50	6	23	24	2	3	4	10	10	22		1	1	9	11	18
Construction	545	464	433	26	23	20	22	17	14	6	6	10	9	7	4		1	6	15	15	15
Drafting/Design	186	232	199	16	17	22	1	1	2	2	2	6	2	9	3	1				4	6
Electrical	2079	2090	2061	94	112	93	100	131	123	11	30	27	42	77	77	1	8	5	82	71	63
Electromechanical	147	142	155	6	7		20	14	27	8	5	6	4	1	3				2	4	5
Electronic	3218	3462	3148	76	82	92	112	104	93	35	47	51	96	99	103	5	6	4	141	109	109
Engineering Science		5	9			2			1												
General Engineering	985	846	702	85	68	41	20	23	11	52	63	32	66	49	38	6	4	1	19	11	27
Industrial/Manuf	1427	1393	1352	159	146	150	36	45	76	17	21	26	13	20	17	1	2	2	48	30	32
Marine	56	63	107	2	5	6	3	1	6	1	1	4	7	3	1				6	7	2
Materials	2	2	5			1															
Mechanical	2120	2016	1930	106	81	98	83	93	70	33	26	32	30	64	39	4	1	6	100	102	77
Mining/Metall/Weld	69	51	31	4		5		2	1	5									5	4	3
Nuclear			2												2						
Others	322	236	240	31	54	55	5	6	8	2	4	4		2	4				15	9	7
ALL STUDENTS*	12503	12303	11729	759	735	730	466	511	517	212	234	232	307	366	325	20	30	27	570	472	457

* Note: groups are neither all-inclusive nor mutually exclusive, and will not sum to totals.

FIELD: Engineering

SOURCE: Engineering and Technology Degrees, 1987 through 1989, Engineering Manpower Commission

TABLE 7-33

ASSOCIATE DEGREES AWARDED IN ENGINEERING TECHNOLOGY BY CURRICULUM, SEX AND MINORITY GROUP 1986 - 1988

CURRICULUM	TOTAL			WOMEN			BLACKS			HISPANICS			ASIAN AMERICANS			AMER INDS			FOREIGN NATS		
	1987	1988	1989	'87	'88	'89	'87	'88	'89	'87	'88	'89	'87	'88	'89	'87	'88	'89	'87	'88	'89
Aerospace & related	251	292	269	12	6	5	36	35	37	35	47	31	20	21	21				13	21	41
Air Cond/Heat/Refrig	115	216	205	12	1	3		5	3		2		2				7	6	1		
Architectual	668	779	758	119	134	156		21	38	19	6	27	6	12	17	3	4		15	7	14
Automotive	231	251	253	5	7	7	42	9	16	4	3	8	3	4	5	1	3	2		3	2
Chemical	204	231	208	92	96	96	14	11	19	5	2	8	6	6	5					2	3
Civil	829	882	868	85	95	88	24	25	27	16	10	12	10	6	7	4	4	1	29	14	12
Computer	960	960	843	241	214	212	21	97	85	21	25	23	39	41	40	3	4	6	45	19	23
Construction	299	338	303	12	13	26		4	9	4	6	6	2	1	2	1	2	1		1	3
Drafting/Design	663	792	589	139	144	116	15	32	23	16	15	11	10	5	13	1	5	9	20	8	7
Electrical	2663	2552	2288	159	139	146	30	94	103	63	44	65	56	61	90	8	10	13	49	9	21
Electromechanical	385	462	350	28	32	25	114	15	34	9	6	14	11	6	11		1		4		6
Electronic	2840	265	2411	267	196	177	30	136	123	56	51	68	104	136	109	9	8	5	47	53	34
Engineering Science	33	28	28	6	4	44		3			1	1	2	2	1						
General Engineering	77	107	239	8	14	24	4	4	8		3	4	3	6	2				2		
Industrial/Manufa	866	899	893	84	85	101	35	28	46	8	7	16	6	18	23	2	1	1	9	15	5
Marine	12	6	8	4	2	2					1				1						
Materials	20	51	36		2	3		1				1									
Mechanical	1964	2069	1773	165	155	120	65	69	53	28	17	24	35	38	44	4	7	4	28	26	21
Mining/Metall/Weid	42	54	42	2	3	5	2	3	1		2			1							
Nuclear	24	30	23	6	4	3	1	1													
Others	281	289	258	51	39	36	19	8	19	6	7	9	3	1	6		1		4	3	6
ALL STUDENTS*	13428	13943	12645	1497	1385	1355	681	601	644	290	255	328	314	365	397	36	57	48	266	181	198

* Note: groups are neither all-inclusive nor mutulally exclusive, and will not sum to totals.

FIELD: Engineering Technology

SOURCE: Engineering and Technology Enrollments Fall 1979 through 1988, Engineering Manpower Commission

TABLE 7-34

ENGINEERING TECHNOLOGY ENROLLMENTS OF ALL STUDENTS, WOMEN AND MINORITIES, Fall 1979 - 1988

	ASSOCIATE DEGREE & PRE-ENGINEERING PROGRAMS					BACHELOR OF TECHNOLOGY PROGRAMS								
	Full Time					Full Time								All
YEAR (Fall)	1st Year	2nd Year	Other Years	Total	Part Time	1st Year	%	2nd Year	3rd Year	4th Year	Total	%T	Part Time	Post Bacc.
ALL STUDENTS														
1979	47,517	24,988	816	73,321	41,284	8,680	100	6,547	9,902	9,842	34,971	100	9,982	294
1980	67,971	35,434	1,188	104,593	54,549	10,998	100	8,543	12,271	12,132	43,944	100	12,767	556
1981	55,202	32,461	872	88,535	45,299	10,691	100	8,313	13,339	13,020	45,363	100	11,409	546
1982	51,513	29,438	797	81,748	45,095	7,826	100	7,369	11,419	11,604	38,218	100	10,696	376
1983	36,866	23,618	925	61,409	37,299	16,166	100	10,181	11,818	12,875	51,040	100	13,252	296
1984	29,211	20,053	1,165	50,429	31,811	17,595	100	11,663	15,561	15,911	60,730	100	14,640	287
1985	25,618	16,579	466	42,663	29,321	8,771	100	6,714	10,554	13,829	39,868	100	11,212	271
1986	29,701	18,699	659	49,059	33,629	9,476	100	6,913	10,839	14,251	41,479	100	13,225	413
1987	24,633	16,450	1,404	42,487	33,144	8,052	100	6,456	9,890	13,715	38,113	100	14,757	985
1988	24,825	15,530	1,760	42,115	36,954	8,652	100	6,322	9,436	13,099	37,509	100	15,126	574
WOMEN														
1979	5,621	2,428	180	8,229	4,923	800	9.2	533	595	447	2,375	6.8	508	82
1980	8,754	3,795	371	12,920	7,594	1,085	9.9	837	947	834	3,703	8.4	776	60
1981	7,838	3,970	68	11,876	8,059	1,360	12.7	978	1,158	1,067	4,563	10.1	766	62
1982	6,472	3,503	45	10,020	5,389	762	9.7	624	848	736	2,970	7.8	599	29
1983	4,296	2,701	38	7,035	[illegible],307	1,284	7.9	796	890	960	3,930	7.7	964	42
1984	3,640	2,295	90	6,025	3,375	2,211	12.6	1,399	1,634	1,514	6,758	11.1	1,477	71
1985	3,331	1,877	20	5,228	3,744	774	8.8	605	814	1,097	3,290	8.3	958	44
1986	3,585	2,039	40	5,664	3,141	865	9.1	714	921	1,214	3,714	9.0	1,045	67
1987	2,848	1,723	127	4,698	3,932	659	8.2	526	727	1,325	3,237	8.5	1,105	66
1988	3,007	1,692	140	4,839	5,139	737	8.5	538	744	1,032	3,051	8.1	1,490	50
BLACKS														
1979	4,101	1,601	48	5,750	2,726	660	7.6	473	537	447	2,117	6.1	323	8
1980	5,888	2,191	60	8,139	3,762	1,071	9.7	752	896	716	3,435	7.8	552	20
1981	4,519	1,834	67	6,420	3,860	1,209	11.3	886	978	905	3,978	8.8	538	39
1982	4,567	1,795	22	6,384	2,922	818	10.5	707	670	542	2,737	7.2	483	7
1983	3,512	1,479	24	5,015	2,716	2,544	15.7	1,237	933	760	5,474	10.7	889	15
1984	2,611	1,273	10	3,894	2,245	2,588	14.7	1,400	1,310	1,038	6,336	10.4	1,037	13
1985	2,582	1,121	5	3,708	2,671	1,117	12.7	642	725	768	3,252	8.2	474	54
1986	3,173	1,311	5	4,489	2,194	1,299	13.7	811	764	856	3,730	9.0	633	15
1987	1,893	900	112	2,905	2,205	1,074	13.3	711	760	886	3,431	9.0	744	33
1988	1,923	901	174	2,998	2,732	1,288	14.9	764	760	872	3,684	9.8	869	17

	ASSOCIATE DEGREE & PRE-ENGINEERING PROGRAMS					BACHELOR OF TECHNOLOGY PROGRAMS								
	Full Time					Full Time								All
YEAR (Fall)	1st Year	2nd Year	Other Years	Total	Part Time	1st Year	%	2nd Year	3rd Year	4th Year	Total	%T	Part Time	Post Bacc.
HISPANICS														
1979	1,214	502	29	1,745	857	184	2.1	137	243	228	792	2.3	267	5
1980	2,586	1,236	51	3,873	1,291	151	1.4	146	280	228	805	1.8	332	15
1981	1,668	797	8	2,473	1,064	213	2.0	146	270	268	897	2.0	465	5
1982	2,015	815	34	2,864	1,073	216	2.8	170	263	236	885	2.3	400	8
1983	1,475	569	28	2,072	803	730	4.5	425	405	365	1,925	3.8	515	11
1984	1,026	563	30	1,619	792	918	5.2	451	543	489	2,401	4.0	523	3
1985	888	484	26	1,398	887	339	3.9	196	393	515	1,443	3.6	355	8
1986	1,405	613	12	2,030	594	358	3.8	228	299	357	1,242	3.0	198	12
1987	708	398	46	1,152	845	321	4.0	261	370	468	1,420	3.7	403	16
1988	722	415	94	1,231	1,045	349	4.0	234	305	414	1,302	3.5	412	9
ASIAN AMERICANS														
1979	718	349	18	1,085	298	151	1.7	104	214	175	644	1.8	111	5
1980	981	543	35	1,559	541	127	1.2	94	228	232	681	1.5	110	20
1981	1,015	557	34	1,606	660	192	1.8	130	182	285	789	1.7	216	6
1982	1,048	544	31	1,623	500	197	2.5	224	286	263	972	2.5	236	23
1983	807	421	38	1,266	560	420	2.6	323	317	423	1,483	2.9	401	26
1984	641	447	21	1,109	467	432	2.5	336	478	474	1,720	2.8	436	5
1985	667	444	9	1,120	679	348	4.0	263	302	442	1,355	3.4	301	10
1986	908	562	10	1,480	458	432	4.6	297	416	442	1,587	3.8	361	14
1987	656	462	43	1,161	605	399	5.0	326	476	759	1,960	5.1	444	28
1988	683	436	48	1,167	822	425	4.9	311	482	683	1,901	5.1	599	23
AMERICAN INDIAN														
1979	335	133	5	473	124	32	0.4	24	39	36	131	0.4	18	0
1980	412	151	5	568	160	48	0.4	27	33	42	150	0.3	13	0
1981	420	174	3	597	152	42	0.4	16	23	31	112	0.2	39	1
1982	245	119	3	367	102	32	0.4	21	32	37	122	0.3	30	0
1983	311	121	3	435	92	105	0.6	71	64	84	324	0.6	28	2
1984	258	130	5	393	68	65	0.4	50	51	55	221	0.4	31	0
1985	259	110	1	370	84	45	0.5	35	33	55	168	0.4	13	0
1986	213	92	3	308	82	39	0.4	32	38	58	167	0.4	17	2
1987	137	85	4	226	105	35	0.4	13	35	64	147	0.4	26	1
1988	156	65	5	226	91	44	0.5	24	49	84	201	0.5	57	36

SOURCE: Office of Personnel Management, unpublished tabulations

TABLE 7-35

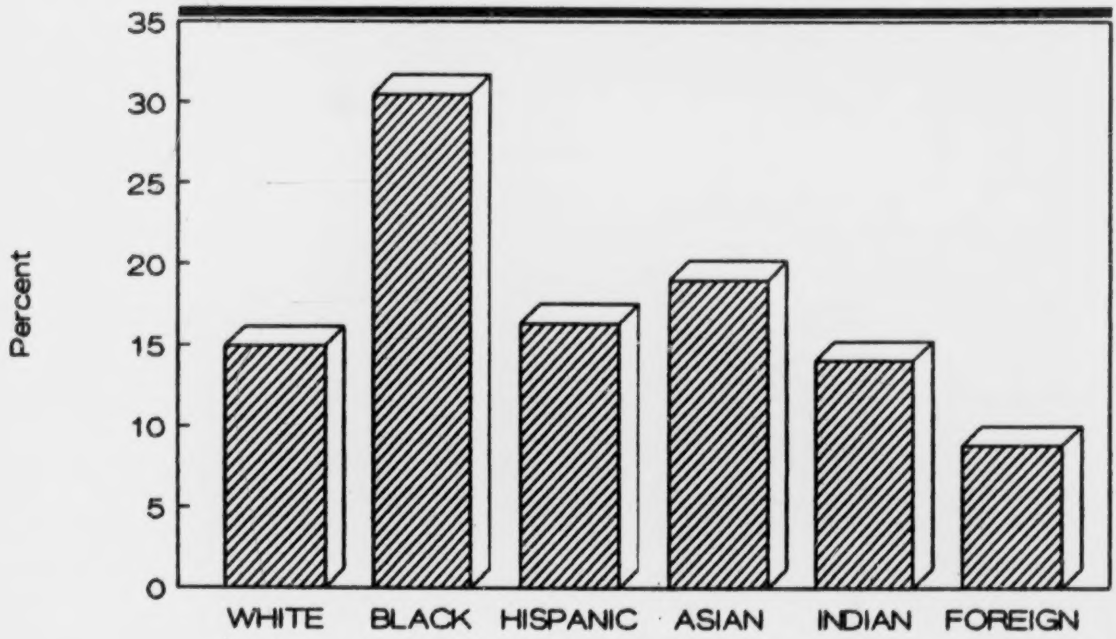
NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN ENGINEERING & ARCHITECTURE BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, SEPT 30, 1988

	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		ASIAN		AM. INDIAN		WHITE	
OCCUPATIONAL TITLE	TOTAL	WOMEN	% W	TOTAL	%	WOMEN	% W	No.	% B	No.	% H	No.	% A	No.	% I	No.	% W
General Engineering	19942	1094	5.5	2345	11.8	226	9.6	626	3.1	596	3.0	1031	5.2	92	0.5	17597	88.2
Safety Engineering	577	45	7.8	84	14.6	11	13.1	17	2.9	38	6.6	26	4.5	3	0.5	493	85.4
Fire Preven. Engineering	140	4	2.9	11	7.9	1	9.1	2	1.4	1	0.7	7	5.0	1	0.7	129	92.1
Materials Engineering	1250	184	14.7	144	11.5	35	24.3	32	2.6	27	2.2	83	6.6	2	0.2	1106	88.5
Landscape Architecture	623	101	16.2	25	4.0	4	16.0	4	0.6	10	1.6	8	1.3	3	0.5	598	96.0
Architecture	1920	221	11.5	477	24.8	57	11.9	180	9.4	92	4.8	193	10.1	12	0.6	1443	75.2
Civil Engineering	15930	1168	7.3	2152	13.5	224	10.4	405	2.5	585	3.7	1041	6.5	121	0.8	13778	86.5
Environmental Engineering	2926	594	20.3	498	17.0	136	27.3	129	4.4	132	4.5	228	7.8	9	0.3	2428	83.0
Mechanical Engineering	13378	823	6.2	2024	15.1	184	9.1	429	3.2	343	2.6	1203	9.0	49	0.4	11354	84.9
Nuclear Engineering	3136	171	5.5	387	12.3	32	8.3	48	1.5	28	0.9	296	9.4	15	0.5	2749	87.7
Electrical Engineering	4822	292	6.1	1001	20.8	104	10.4	216	4.5	161	3.3	604	12.5	20	0.4	3821	79.2
Computer Engineering	16	4	25.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	16	100.0
Electronics Engineering	28276	1837	6.5	4459		477	10.7	1095	3.9	1001	3.5	2277	8.1	86	0.3	23817	84.2
Biomedical Engineering	385	67	17.4	40	10.4	11	27.5	9	2.3	6	1.6	25	6.5	0	0.0	345	89.6
Aerospace Engineering	8988	619	6.9	837	9.3	90	10.8	226	2.5	238	2.6	357	4.0	16	0.2	8151	90.7
Naval Architecture	1271	82	6.5	185	14.6	18	9.7	43	3.4	23	1.8	118	9.3	1	0.1	1086	85.4
Mining Engineering	432	19	4.4	30	6.9	1	3.3	0	0.0	4	0.9	24	5.6	2	0.5	402	93.1
Petroleum Engineering	465	40	8.6	43	9.2	5	11.6	7	1.5	15	3.2	16	3.4	5	1.1	422	90.8
Agricultural Engineering	401	10	2.5	17	4.2	0	0.0	2	0.5	6	1.5	6	1.5	3	0.7	384	95.8
Ceramic Engineering	74	13	17.6	3	4.1	0	0.0	0	0.0	0	0.0	3	4.1	0	0.0	71	95.9
Chemical Engineering	1698	294	17.3	270	15.9	63	23.3	49	2.9	72	4.2	147	8.7	2	0.1	1428	84.1
Welding Engineering	94	5	5.3	17	18.1	1	5.9	2	2.1	1	1.1	12	12.8	2	2.1	77	81.9
Industrial Engineering	3136	424	13.5	425	13.6	92	21.6	127	4.0	106	3.4	180	5.7	12	0.4	2711	86.4
TOTALS	109880	8111	7.4	15474	14.1	1772	11.5	3648	3.3	3485	3.2	7885	7.2	456	0.4	94406	85.9

SOURCE: Series of Earned Degrees Conferred, 1986-87, National Center for Education Statistics

CHART 7-2

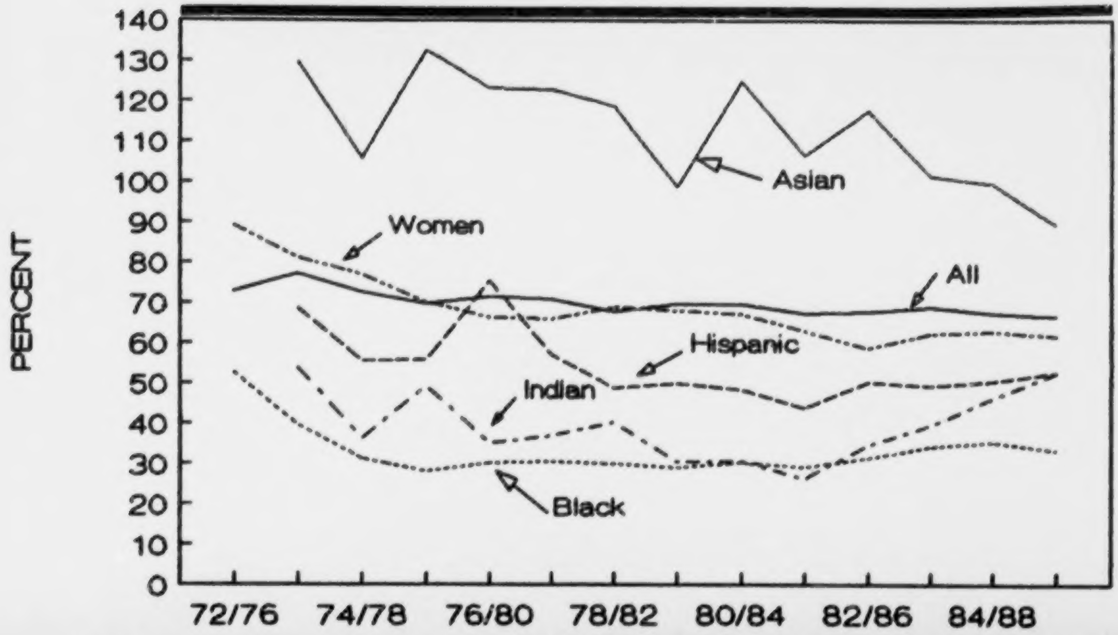
PERCENT WOMEN MINORITY ENGINEER BS GRADUATES, 1987



Engineering Enrollments 1972-84 and Engineering Degrees 1976-88, Engineering Manpower Commission

CHART 7-3

RETENTION RATES OF FRESHMEN ENGINEERS, 1972/76 - 1985/89



FIELD: Agricultural Sciences

SOURCE: Science and Engineering Doctorates: 1960-85; National Science Foundation, 1987; and Doctorate Recipients from United States Universities, Summary Reports, 1972-1988, National Research Council

TABLE 8-1

PHD AWARDS IN THE AGRICULTURAL SCIENCES BY SUBFIELD AND SEX, 1960-1988

	Year of Doctorate														
	1960-69			1970-79			1980-86			1987			1988		
Fields	Total	Women	%Wom	Total	Women	%Wom	Total	Women	%Wom	Total	Women	%Wom	Total	Women	%Wom
TOTAL	5560	60	1.1	9956	388	3.9	10379	1012	9.8	1112	193	17.4	1170	217	18.5
Agricultural Economics(7)	90	0	0.0	1537	46	3.0	2301	321	14.0	136	23	16.9	155	31	20.0
Animal Breeding & Genetics(1)	1224	20	1.6	448	8	1.8	200	34	17.0	23	3	13.0	27	2	7.4
Animal Nutrition(2)							348	52	14.9	82	13	15.9	54	12	22.2
Dairy Science(8)													12	1	8.3
Poultry Science(8)													10	2	20.0
Fisheries Science(3)							185	30	16.2	32			42	8	19.0
Animal Sci/Nutrition(2)	1	1	100	880	52	5.9	401	47							
Animal Sciences, Other(2)							463	66	14.3	77	16	20.8	86	13	15.1
Agronomy	1566	6	0.4	1494	40	2.7	1248	117	9.4	143	17	11.9	141	19	13.5
Plant Breeding & Genetics(5)							403	62	15.4	70	11	15.7	83	12	14.5
Plant Pathology(5)							412	89	21.6	76	22	28.9	46	12	26.1
Plant Protection-Pest Mgmt(8)													1		
Phytopathology(5)	871	29	3.3	943	72	7.6	331	62							
Plant Sciences, Other(5)							100	14	14.0	20	3	15.0	23	3	13.0
Food Science(9)	39	1	2.6	921	162	17.6	963	258	26.8	131	48	36.6	16	3	18.8
Food Engineering(8)													6	1	16.7
Food Sciences Other(8)													119	36	30.3
Soil Sciences(6)	40		0.0	781	20	2.6	733	63	8.6	74	7	9.5	18	1	5.6
Soil Chemistry/Microbio(8)													33	7	21.2
Soil Sciences Other(8)													62	11	17.7
Horticulture Sciencs	589	13	2.2	645	32	5.0	597	108	18.1	71	16	22.5	61	16	26.2
Forestry Science(9)	466	1	0.2	792	13	1.6	735	72	9.8	100	5	5.0	15	2	13.3
Forest Biology(8)													21	3	14.3
Forest Engineering(8)													3		
Forest Management(8)													18	2	11.1
Wood Science(8)													7		
Renewable Natural Resouces(8)													7		
Forestry & Related Sci Oth(8)													35	6	17.1
Fish & Wildlife(3)	226	1	0.4	570	16	2.8	204	23							
Wildlife(8)													3		
Wildlife/Range Mgmt(3)							158	8	5.1	23	1	4.3	36	8	22.2
Agriculture, General	45	1	2.2	56	4	7.1	35	2	5.7	5			9	3	33.3
Agriculture, Other	403	8	2.0	889	29	3.3	562	55	9.8	49	8	16.3	21	3	14.3

(1) Called "Animal husbandry before 1983. (2) "Animal sciences" subfield introduced in 1972, name changed to "Animal science and animal nutrition" in 1977, split into two separate subfields in 1983, both dropped in 1988. (3) "Fish and wildlife" split into to separate subfields in 1983. (4) Introduced as "Food science and technology" in 1969, name changed to "Food sciences in 1983. (5) Phytopathology" discontinued in 1983 and indicated subfields were introduced. (6) Called "Soils and soil science" before 1983, split out in 1988. (7) Added in 1969. (8) Added in 1988. (9) Split out in subfields in 1988.

SOURCE: Science and Engineering Doctorates: 1960-85; National Science Foundation, 1987; and Doctorate Recipients from United States Universities, Summary Reports, 1972-1988, National Research Council

TABLE 8-2

PHD AWARDS IN THE BIOLOGICAL SCIENCES BY SUBFIELD AND SEX, 1960-1988

	Year of Doctorate														
	1960-69			1970-79			1980-86			1987			1988		
Fields	Total	Women	%Wom	Total	Women	%Wom	Total	Women	%Wom	Total	Women	%Wom	Total	Women	%Wom
TOTAL	19571	2858	14.6	35618	7543	21.2	30426	9458	31.1	3824	1350	35.3	4106	1501	36.6
Biochemistry	3976	714	18.0	6116	1328	21.7	4948	1490	30.1	572	198	34.6	613	203	33.1
Biophysics	602	50	8.3	1178	142	12.1	686	105	15.3	86	22	25.6	97	21	21.6
Bacteriology(7)							68	18	26.5	13	6	46.2	6	2	33.3
Microbiology/Bacteriology(7)	2601	473	18.2	3703	932	25.2	1044	312	29.9						
Plant Genetics(4)							120	35	29.2	25	7	28.0	26	6	23.1
Genetics(4)	1060	160	15.1	1424	390	27.4	490	182	37.1						
Plant Pathology(5)							163	34	20.9	33	10	30.3	30	9	30.0
Pathology(5)	324	18	5.6	793	126	15.9	311	81	26.0						
Plant Physiology(6)	554	53	9.6	702	111	15.8	480	121	25.2	62	15	24.2	73	22	30.1
Hydrobiology	95	4	4.2	155	14	9.0									
Botany, other (1)							603	187	31.0	107	36	33.6	112	41	36.6
Botany(1)	1384	193	13.9	1745	359	20.6	437	122	27.9						
Anatomy	679	123	18.1	1349	323	23.9	1023	343	33.5	90	41	45.6	88	32	36.4
Biometrics & Biostatistics	177	24	13.6	406	85	20.9	353	117	33.1	37	14	37.8	47	15	31.9
Cell Biology(2)							571	211	37.0	127	55	43.3	117	55	47.0
Hydrobiology	95	4	4.2	155	14	9.0									
Cytology(2)	244	75	30.7	422	150	35.5	132	45	34.1						
Ecology	477	18	3.8	1435	163	11.4	1508	356	23.6	158	38	24.1	155	47	30.3
Embryology	217	69	31.8	252	77	30.6	115	52	45.2	6			7	3	42.9
Endocrinology(3)							109	39	35.8	19	11	57.9	21	10	47.6
Entomology	1223	58	4.7	1726	115	6.7	1287	201	15.6	123	25	20.3	133	26	19.5
Immunology				630	196	31.1	1099	434	39.5	135	52	38.5	178	90	50.6
Molecular Biology	91	19	20.9	1365	395	28.9	1945	693	35.6	302	115	38.1	362	129	35.6
Microbiology(7)							1552	581	37.4	299	101	33.8	333	120	36.0
Neurosciences							828	285	34.4	152	47	30.9	161	58	36.0
Nutritional Sciences(8)	27	7	25.9	364	213	58.5	877	562	64.1	140	96	68.6	126	88	69.8
Parasitology				133	21	15.8	160	25	15.6	16	5	31.3	20	8	40.0
Toxicology(3)							457	122	26.7	115	34	29.6	108	30	27.8
Human & Animal Genetics(4)							478	221	46.2	114	54	47.4	118	57	48.3
Human & Animal Pathology(5)							490	147	30.0	124	46	37.1	112	43	38.4
Human & Animal Pharmacology	958	98	10.2	1852	295	15.9	1965	563	28.7	233	86	36.9	249	91	36.5
Human & Animal Physiology(6)							1198	339	28.3	245	74	30.2	225	89	39.6
Animal Physiology(6)	1628	242	14.9	3286	576	17.5	976	224	23.0						
Animal/plant Physiology(6)	307	32	10.4												
Zoology,other(9)							799	241	30.2	139	44	31.7	167	43	25.7
Zoology(9)	2242	311	13.9	2906	504	17.3	623	138							
Biological Sci, General	230	46	20.0	1738	475	27.3	1568	496	31.6	228	82	36.0	262	100	38.2
Biological Sci, Other	380	67	17.6	1783	539	30.2	963	336	34.9	124	36	29.0	160	63	39.4

(1) Called "Botany" before 1983. (2) "Cytology" introduced in 1962, discontinued in 1983. "Cell biology" introduced in 1983 (3) Introduced in 1983. (4) "Genetics" split into "Plant genetics" and "Human and animal genitics in 1983. (5) "Pathology" split into "Plant pathology" and "Human and animal pathology" in 1983. (6) In 1962 "Animal and plant physiology" was split into "Animal physiology" and "Plant physiology." In 1983 "Animal physiology" was replaced by "Human and animal physiology." (7) Originally called "Microbiology." "Bacteriology" added in 1970. In 1963 they were split into separate subfields. (8) "Nutrition" discontinued in 1963. "Nutrition and dietetics" introduced in 1976, then replaced by "Nutritional sciences" in 1983. (9) "Zoology" discontinued in 1983 and Zoology, other" introduced.

SOURCE: Earned Degrees Conferred, 1971-1987, National Center for Education Statistics

TABLE 8-3

PhD DEGREES IN THE LIFE SCIENCES BY SEX AND SUBFIELD (1950 - 1987)

					Life Sciences Fields									
					Agricultural					Biological				
Year	Total Life Sci	Men	Women	%W	No.	%Ag	Men	Wom	%W	No.	%Bio	Men	Wom	%W
1950	1033	938	95	9	368	36	364	4	1.1	665	64	574	91	14
1951	1192	1090	102	9	379	32	376	3	0.8	813	68	714	99	12
1952	1187	1093	94	8	412	35	402	10	2.4	775	65	691	84	11
1953	1443	1320	123	9	473	33	468	5	1.1	970	67	852	118	12
1954	1628	1517	111	7	515	32	508	7	1.4	1113	68	1009	104	9
1955	1505	1398	107	7	507	34	499	8	1.6	998	66	899	99	10
1956	1404	1281	123	9	379	27	373	6	1.6	1025	73	908	117	11
1957	1449	1327	122	8	341	24	331	10	2.9	1108	76	996	112	10
1958	1465	1321	144	10	340	23	334	6	1.8	1125	77	987	138	12
1959	1427	1307	120	8	376	26	368	8	2.1	1051	74	939	112	11
50-59	13,733	12,592	1,141	8	4,090	30	4,023	67	1.6	9,643	70	8,569	1,074	11
1960	1647	1521	126	8	440	27	433	7	1.6	1207	73	1088	119	10
1961	1646	1502	144	9	450	27	443	7	1.6	1196	73	1059	137	11
1962	1804	1643	161	9	465	26	463	2	0.4	1339	74	1180	159	12
1963	1908	1724	184	10	449	24	441	8	1.8	1459	76	1283	176	12
1964	2181	1978	203	9	555	25	545	10	1.8	1626	75	1433	193	12
1965	2474	2228	246	10	529	21	516	13	2.5	1945	79	1712	233	12
1966	2696	2382	314	12	588	22	581	7	1.2	2108	78	1801	307	15
1967	2900	2546	354	12	637	22	625	12	1.9	2263	78	1921	342	15
1968	3445	2993	452	13	648	19	636	12	1.9	2797	81	2357	440	16
1969	3779	3295	484	13	699	18	687	12	1.7	3080	82	2608	472	15
60-69	24,480	21,812	2,668	11	5,460	22	5,370	90	1.6	19,020	78	16,442	2,578	14
1970	4131	3632	499	12	823	20	795	28	3.4	3308	80	2837	471	14
1971	4534	3910	624	14	874	19	846	28	3.2	3660	81	3064	596	16
1972	4478	3831	647	14	805	18	783	22	2.7	3673	82	3048	625	17
1973	4524	3790	734	16	869	19	848	21	2.4	3655	81	2942	713	20
1974	4220	3488	732	17	765	18	736	29	3.8	3455	82	2752	703	20
1975	4252	3470	782	18	832	20	801	31	3.7	3420	80	2669	751	22
1976	4203	3412	791	19	768	18	714	54	7.0	3435	82	2698	737	21
1977	4199	3408	791	19	753	18	699	54	7.2	3446	82	2709	737	21
1978	4179	3307	872	21	810	19	755	55	6.8	3369	81	2552	817	24
1979	4403	3429	974	22	804	18	743	61	7.6	3599	82	2686	913	25
70-79	43,123	35,677	7,446	17	8,103	19	7,720	383	4.7	35,020	81	27,957	7,063	20
1980	4495	3445	1050	23	827	18	729	98	11.9	3668	82	2716	952	26
1981	4669	3501	1168	25	910	19	797	113	12.4	3759	81	2704	1055	28
1982	4693	3460	1233	26	919	20	788	131	14.3	3774	80	2672	1102	29
1983	4350	3146	1204	28	986	23	860	126	12.8	3364	77	2286	1078	32
1984	4448	3253	1195	27	1011	23	872	139	13.7	3437	77	2381	1056	31
1985	4489	3211	1278	28	1057	24	904	153	14.5	3432	76	2307	1125	33
1986	4352	3046	1306	30	994	23	817	177	17.8	3358	77	2229	1129	34
1986	4291	2946	1345	31	868	20	720	148	17.1	3423	80	2226	1197	35
80-87	35,787	26,008	9,779	27	7,572	21	6,487	1,085	14.3	28,215	79	19,521	8,694	31
TOTAL	117,123	96,089	21,034	18	25,225	22	23,600	1,625	6.4	91,898	78	72,489	19,409	21

SOURCE: Earned Degrees Conferred, 1971-1987, National Center for Education Statistics

TABLE 8-3 (continued)

MASTERS DEGREES IN THE LIFE SCIENCES BY SUBFIELD AND SEX (1950 - 1987)

					Life Sciences Fields									
					Agricultural					Biological				
Year	Total Life Sci	Men	Women	%W	No.	%Ag	Men	Women	%W	No.	%Bio	Men	Women	%W
1950	4158	3624	534	13	1505	36	1492	13	0.9	2653	64	2132	521	19.6
1951	4417	3890	527	12	1568	35	1540	28	1.8	2849	65	2350	499	17.5
1952	4184	3717	467	11	1608	38	1578	30	1.9	2576	62	2139	437	17.0
1953	3568	3158	410	11	1470	41	1438	32	2.2	2098	59	1720	378	18.0
1954	3007	2649	358	12	1302	43	1279	23	1.8	1705	57	1370	335	19.6
1955	3090	2657	433	14	1364	44	1336	28	2.1	1726	56	1321	405	23.5
1956	2867	2461	406	14	1038	36	1021	17	1.6	1829	64	1440	389	21.3
1957	3019	2616	403	13	1122	37	1103	19	1.7	1897	63	1513	384	20.2
1958	3179	2721	458	14	1104	35	1089	15	1.4	2075	65	1632	443	21.3
1959	3537	2976	561	16	1183	33	1166	17	1.4	2354	67	1810	544	23.1
50-59	35,026	30,469	4,557	13	13,264	38	13,042	222	1.7	21,762	62	17,427	4,335	19.9
1960	3751	3178	573	15	1203	32	1190	13	1.1	2548	68	1988	560	22.0
1961	4085	3415	670	16	1241	30	1212	29	2.3	2844	70	2203	641	22.5
1962	4672	3887	785	17	1357	29	1321	36	2.7	3315	71	2566	749	22.6
1963	4718	3824	894	19	1261	27	1232	29	2.3	3457	73	2592	865	25.0
1964	5357	4273	1084	20	1344	25	1302	42	3.1	4013	75	2971	1042	26.0
1965	5978	4816	1162	19	1366	23	1330	36	2.6	4612	77	3486	1126	24.4
1966	6666	5286	1380	21	1666	25	1594	72	4.3	5000	75	3692	1308	26.2
1967	7465	5948	1517	20	1761	24	1687	74	4.2	5704	76	4261	1443	25.3
1968	8315	6451	1864	22	1807	22	1730	77	4.3	6508	78	4721	1787	27.5
1969	8809	6793	2016	23	2073	24	1974	99	4.8	6736	76	4819	1917	28.5
60-69	59,816	47,871	11,945	20	15,079	25	14,572	507	3.4	44,737	75	33,299	11,438	25.6
1970	8590	6374	2216	26	1807	21	1686	121	6.7	6783	79	4688	2095	30.9
1971	8320	6130	2190	26	2040	25	1910	130	6.4	6280	75	4220	2060	32.8
1972	8914	6587	2327	26	2280	26	2102	178	7.8	6634	74	4485	2149	32.4
1973	9080	6843	2237	25	2391	26	2188	203	8.5	6689	74	4655	2034	30.4
1974	9605	7195	2410	25	2524	26	2258	266	10.5	7081	74	4937	2144	30.3
1975	9618	7207	2411	25	2687	28	2349	338	12.6	6931	72	4858	2073	29.9
1976	9823	7204	2619	27	2884	29	2458	426	14.8	6939	71	4746	2193	31.6
1977	10707	7696	3011	28	3239	30	2740	499	15.4	7468	70	4956	2512	33.6
1978	10711	7485	3226	30	3484	33	2790	694	19.9	7227	67	4695	2532	35.0
1979	10719	7259	3460	32	3499	33	2749	750	21.4	7220	67	4510	2710	37.5
70-79	96,087	69,980	26,107	27	26,835	28	23,230	3,605	13.4	69,252	72	46,750	22,502	32.5
1980	10278	6952	3326	32	3424	33	2627	797	23.3	6854	67	4325	2529	36.9
1981	9682	6421	3261	34	3420	35	2589	831	24.3	6262	65	3832	2430	38.8
1982	9755	6283	3472	36	3628	37	2686	942	26.0	6127	63	3597	2530	41.3
1983	9654	6070	3584	37	3652	38	2669	983	26.9	6002	62	3401	2601	43.3
1984	8998	5544	3454	38	3592	40	2548	1044	29.1	5406	60	2996	2410	44.6
1985	8455	5088	3367	40	3396	40	2441	955	28.1	5059	60	2647	2412	47.7
1986	8263	4876	3387	41	3250	39	2260	990	30.5	5013	61	2616	2397	47.8
1987	7745	4436	3309	43	2791	36	1897	894	32.0	4954	64	2539	2415	48.7
80-86	65,085	41,234	23,851	37	24,362	37	17,820	6,542	26.9	40,723	63	23,414	17,309	42.5
TOTAL	256,014	189,554	66,460	26	79,540	31	68,664	10,876	13.7	176,474	69	120,890	55,584	31.5

FIELD: Life Sciences

SOURCE: Earned Degrees Conferred, 1971-1987, National Center for Education Statistics

TABLE 8-3 (continued)

BACHELORS DEGREES IN THE LIFE SCIENCES BY SUBFIELD AND SEX (1950 - 1987)

					Life Sciences Fields									
					Agricultural					Biological				
Year	Total Life Sci	Men	Women	%W	No.	%Ag	Men	Women	%W	No.	%Bio	Men	Women	%W
1950	39101	34173	4928	12.6	14999	38	14837	162	1.1	24102	62	19336	4766	19.8
1951	32271	28018	4253	13.2	12165	38	12020	145	1.2	20106	62	15998	4108	20.4
1952	25231	21426	3805	15.1	9595	38	9451	144	1.5	15636	62	11975	3661	23.4
1953	21835	18360	3475	15.9	8825	40	8674	151	1.7	13010	60	9686	3324	25.5
1954	21584	18079	3505	16.2	7832	36	7687	145	1.9	13752	64	10392	3360	24.4
1955	19927	16677	3250	16.3	7170	36	7052	118	1.6	12757	64	9625	3132	24.6
1956	19890	16508	3382	17.0	6117	31	6002	115	1.9	13773	69	10506	3267	23.7
1957	21903	18327	3576	16.3	6619	30	6465	154	2.3	15284	70	11862	3422	22.4
1958	23069	19399	3670	15.9	6769	29	6677	92	1.4	16300	71	12722	3578	22.0
1959	23861	19734	4127	17.3	6767	28	6692	75	1.1	17094	72	13042	4052	23.7
50-59	248,672	210,701	37,971	15.3	86,858	35	85,557	1,301	1.5	161,814	65	125,144	36,670	22.7
1960	24141	19650	4491	18.6	6335	26	6242	93	1.5	17806	74	13408	4398	24.7
1961	23900	19078	4822	20.2	5717	24	5647	70	1.2	18183	76	13431	4752	26.1
1962	25200	19730	5470	21.7	5894	23	5804	90	1.5	19306	77	13926	5380	27.9
1963	27801	21627	6174	22.2	6063	22	5951	112	1.8	21738	78	15676	6062	27.9
1964	31611	24398	7213	22.8	6194	20	6069	125	2.0	25417	80	18329	7088	27.9
1965	34842	26565	8277	23.8	6770	19	6600	170	2.5	28072	81	19965	8107	28.9
1966	36864	28400	8464	23.0	7196	20	7042	154	2.1	29668	80	21358	8310	28.0
1967	39408	30460	8948	22.7	7889	20	7712	177	2.2	31519	80	22748	8771	27.8
1968	43260	33169	10091	23.3	8328	19	8060	268	3.2	34932	81	25109	9823	28.1
1969	48713	37405	11308	23.2	9995	21	9594	401	4.0	38718	79	27811	10907	28.2
60-69	335,740	260,482	75,258	22.4	70,381	21	68,721	1,660	2.4	265,359	79	191,761	73,598	27.7
1970	52129	40254	11875	22.8	11369	22	10872	497	4.4	40760	78	29382	11378	27.9
1971	51461	39658	11803	22.9	11531	22	11003	528	4.6	39930	78	28655	11275	28.2
1972	53484	40790	12694	23.7	12488	23	11761	727	5.8	40996	77	29029	11967	29.2
1973	59486	44916	14570	24.5	13838	23	12751	1087	7.9	45648	77	32165	13483	29.5
1974	68226	50390	17836	26.1	15125	22	13586	1539	10.2	53101	78	36804	16297	30.7
1975	72710	51899	20811	28.6	16531	23	14103	2428	14.7	56179	77	37796	18383	32.7
1976	77301	53512	23789	30.8	18289	24	14798	3491	19.1	59012	76	38714	20298	34.4
1977	78472	52863	25609	32.6	20199	26	15538	4661	23.1	58273	74	37325	20948	35.9
1978	77138	50184	26954	34.9	21027	27	15610	5417	25.8	56111	73	34574	21537	38.4
1979	75085	47537	27548	36.7	21631	29	15540	6091	28.2	53454	71	31997	21457	40.1
70-79	665,492	472,003	193,489	29.1	162,028	24	135,562	26,466	16.3	503,464	76	336,441	167,023	33.2
1980	71617	44021	27596	38.5	21121	29	14616	6505	30.8	50496	71	29405	21091	41.8
1981	66832	40046	26786	40.1	20025	30	13600	6425	32.1	46807	70	26446	20361	43.5
1982	63884	37602	26282	41.1	19120	30	12892	6228	32.6	44764	70	24710	20054	44.8
1983	62119	36182	25937	41.8	19063	31	12647	6416	33.7	43056	69	23535	19521	45.3
1984	55863	32097	23766	42.5	17223	31	11539	5684	33.0	38640	69	20558	18082	46.8
1985	54248	30747	23501	43.3	15803	29	10683	5120	32.4	38445	71	20064	18381	47.8
1986	53203	29889	23314	43.8	14679	28	9896	4783	32.6	38524	72	19993	18531	48.1
1987	53203	25884	21847	41.1	9653	28	6243	3410	23.2	38078	72	19641	18437	47.9
80-87	480,969	276,468	199,029	41.4	136,687	28	92,116	44,571	32.6	338,810	70	184,352	154,458	45.6
TOTAL	1,677,670	1,193,770	483,900	28.8	446,301	27	375,713	70,588	15.8	1,231,369	73	818,057	413,312	33.6

FIELD: Agricultural Sciences

SOURCE: Doctorate Records File and Doctorate Recipients from United States Universities, Summary Reports, 1972-1988, National Research Council

TABLE 8-4

AGRICULTURAL SCIENCES PhD AWARDS BY CITIZENSHIP AND VISA TYPE, 1960 - 1988

YEAR	TOTAL	U.S. No.	U.S. %	FOREIGN Total No.	FOREIGN Total %	FOREIGN Immigrant No.	FOREIGN Immigrant %	Non-Immigrant No.	Non-Immigrant %	Citizenship Unknown
1960	414	306	73.9	107	25.8	16	3.9	91	22.0	1
1961	438	338	77.2	98	22.4	6	1.4	92	21.0	2
1962	470	344	73.2	126	26.8	14	3.0	112	23.8	
1963	466	365	78.3	97	20.8	7	1.5	90	19.3	4
1964	517	366	70.8	149	28.8	14	2.7	135	26.1	2
1965	576	380	66.0	189	32.8	17	3.0	172	29.9	7
1966	576	379	65.8	186	32.3	11	1.9	175	30.4	11
1967	606	408	67.3	195	32.2	13	2.1	182	30.0	3
1978	681	450	66.1	225	33.0	29	4.3	196	28.8	6
1969	720	488	67.8	229	31.8	28	3.9	201	27.9	3
1970	804	564	70.1	237	29.5	38	4.7	199	24.8	3
1971	902	597	66.2	302	33.5	65	7.2	237	26.3	3
1972	853	533	62.5	316	37.0	85	10.0	231	27.1	4
1973	854	543	63.6	308	36.1	75	8.8	233	27.3	3
1874	820	461	56.2	336	41.0	65	7.9	271	33.0	23
1975	904	563	62.3	336	37.2	70	7.7	266	29.4	5
1976	788	491	62.3	281	35.7	37	4.7	244	31.0	16
1977	782	488	62.4	283	36.2	27	3.5	256	32.7	11
1978	853	531	62.3	310	36.3	43	5.0	267	31.3	12
1979	855	543	63.5	294	34.4	29	3.4	265	31.0	18
1980	1,072	666	62.1	391	36.5	42	3.9	349	32.6	15
1981	1,150	685	59.6	434	37.7	46	4.0	388	33.7	31
1982	1,130	741	65.6	364	32.2	32	2.8	332	29.4	25
1983	1,172	728	62.1	411	35.1	45	3.8	366	31.2	33
1984	1,155	698	60.4	427	37.0	44	3.8	383	33.2	30
1985	1,258	766	60.9	450	35.8	47	3.7	403	32.0	42
1986	1,157	657	56.8	434	37.5	54	4.7	380	32.8	66
1987	1,112	650	58.5	391	35.2	59	5.3	332	29.9	71
1988	1,170	619	52.9	471	40.3	78	6.7	393	33.6	80
TOTAL	24,255	15,348	63.3	8,377	34.5	1,136	4.7	7,241	29.9	530

FIELD: Biological Sciences

SOURCE: Doctorate Records File and Doctorate Recipients from United States Universities, Summary Reports, 1972-1988, National Research Council

TABLE 8-5

BIOLOGICAL SCIENCES PhD AWARDS BY CITIZENSHIP AND VISA TYPE, 1960 - 1988

YEAR	TOTAL	U.S.		FOREIGN						Citizen-ship Unknown
		No.	%	Total No.	%	Immigrant No.	%	Non-Immigrant No.	%	
1960	1,246	1,048	84.1	188	15.1	40	3.2	148	11.9	10
1961	1,244	1,020	82.0	208	16.7	35	2.8	173	13.9	16
1962	1,397	1,167	83.5	215	15.4	14	1.0	201	14.4	15
1963	1,510	1,252	82.9	246	16.3	37	2.5	209	13.8	12
1964	1,702	1,376	80.8	293	17.2	43	2.5	250	14.7	33
1965	1,963	1,583	80.6	360	18.3	53	2.7	307	15.6	20
1966	2,135	1,740	81.5	365	17.1	52	2.4	313	14.7	30
1967	2,361	1,947	82.5	378	16.0	80	3.4	298	12.6	36
1978	2,822	2,324	82.4	470	16.7	111	3.9	359	12.7	28
1969	3,084	2,586	83.9	463	15.0	123	4.0	340	11.0	35
1970	3,359	2,813	83.7	522	15.5	161	4.8	361	10.7	24
1971	3,652	3,063	83.9	511	14.0	199	5.4	312	8.5	78
1972	3,663	3,049	83.2	535	14.6	225	6.1	310	8.5	79
1973	3,731	3,085	82.7	570	15.3	251	6.7	319	8.5	76
1874	3,585	2,829	78.9	587	16.4	217	6.1	370	10.3	169
1975	3,636	3,024	83.2	532	14.6	202	5.6	330	9.1	80
1976	3,692	3,090	83.7	500	13.5	170	4.6	330	8.9	102
1977	3,484	2,909	83.5	479	13.7	160	4.6	319	9.2	96
1978	3,508	2,988	85.2	432	12.3	142	4.0	290	8.3	88
1979	3,640	3,119	85.7	429	11.8	132	3.6	297	8.2	92
1980	3,411	2,944	86.3	392	11.5	126	3.7	266	7.8	75
1981	3,397	2,948	86.8	363	10.7	111	3.3	252	7.4	86
1982	3,502	2,973	84.9	417	11.9	105	3.0	312	8.9	112
1983	3,732	3,202	85.8	437	11.7	115	3.1	322	8.6	93
1984	3,872	3,280	84.7	473	12.2	113	2.9	360	9.3	119
1985	3,766	3,126	83.0	531	14.1	109	2.9	422	11.2	109
1986	3,791	3,120	82.3	504	13.3	114	3.0	390	10.3	167
1987	3,824	2,971	77.7	647	16.9	158	4.1	489	12.8	206
1987	4,106	3,119	76.0	744	18.1	191	4.7	553	13.5	243
TOTAL	88,815	73,695	83.0	12,791	14.4	3,589	4.0	9,202	10.4	2,329

SOURCE: Office of Personnel Management, unpublished tabulations

TABLE 8-6

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN THE LIFE SCIENCES BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, SEPT 30, 1988

	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		ASIAN		AM. INDIAN		WHITE	
OCCUPATIONAL TITLE	TOTAL	WOMEN	% W	TOTAL	%	WOMEN	% W	No.	% B	No.	% H	No.	% A	No.	% I	No.	% W
General Biological Science	6374	1543	24.2	791	12.4	262	33.1	308	4.8	124	1.9	285	4.5	74	1.2	5583	87.6
Microbiology	2156	867	40.2	333	15.4	146	43.8	117	5.4	57	2.6	154	7.1	5	0.2	1823	84.6
Pharmacology	470	106	22.6	96	20.4	31	32.3	20	4.3	8	1.7	67	14.3	1	0.2	374	79.6
Agricultural Extension	55	15	27.3	3	5.5	2	66.7	1	1.8	1	1.8	1	1.8	0	0.0	52	94.5
Ecology	398	78	19.6	16	4.0	4	25.0	7	1.8	8	2.0	1	0.3	0	0.0	382	96.0
Zoology	119	19	16.0	3	2.5	1	33.3	0	0.0	1	0.8	2	1.7	0	0.0	116	97.5
Physiology	586	125	21.3	62	10.6	17	27.4	14	2.4	14	2.4	34	5.8	0	0.0	524	89.4
Entomology	736	62	8.4	55	7.5	7	12.7	12	1.6	18	2.4	24	3.3	1	0.1	681	92.5
Toxicology	132	34	25.8	11	8.3	3	27.3	1	0.8	0	0.0	10	7.6	0	0.0	121	91.7
Botany	187	62	33.2	11	5.9	4	36.4	3	1.6	4	2.1	4	2.1	0	0.0	176	94.1
Plant Pathology	324	40	12.3	25	7.7	4	16.0	8	2.5	2	0.6	14	4.3	1	0.3	299	92.3
Plant Physiology	346	53	15.3	30	8.7	11	36.7	5	1.4	3	0.9	21	6.1	1	0.3	316	91.3
Plant Protection & Quarantine	1345	232	17.2	400	29.7	84	21.0	55	4.1	197	14.6	141	10.5	7	0.5	945	70.3
Horticulture	121	27	22.3	12	9.9	1	8.3	4	3.3	1	0.8	7	5.8	0	0.0	109	90.1
Genetics	367	74	20.2	26	7.1	4	15.4	4	1.1	3	0.8	19	5.2	0	0.0	341	92.9
Range Conservaton	1252	160	12.8	101	8.1	14	13.9	0	0.0	63	5.0	5	0.4	33	2.6	1151	91.9
Soil Conservation	5071	521	10.3	565	11.1	44	7.8	315	6.2	126	2.5	29	0.6	95	1.9	4506	88.9
Forestry	6167	686	11.1	323	5.2	39	12.1	34	0.6	104	1.7	57	0.9	128	2.1	5844	94.8
Soil Science	1810	146	8.1	140	7.7	11	7.9	93	5.1	20	1.1	17	0.9	10	0.6	1670	92.3
Agronomy	337	9	2.7	25	7.4	0	0.0	7	2.1	14	4.2	3	0.9	1	0.3	312	92.6
Agricultural Management	3898	465	11.9	387	9.9	47	12.1	229	5.9	105	2.7	20	0.5	33	0.8	3511	90.1
Gen Fish & Wildlife Admi	187	6	3.2	2	1.1	0	0.0	1	0.5	0	0.0	1	0.5	0	0.0	185	98.9
Fishery Biology	1495	187	12.5	99	6.6	10	10.1	30	2.0	18	1.2	36	2.4	15	1.0	1396	93.4
Wildlife Refuge Management	587	62	10.6	35	6.0	8	22.9	6	1.0	18	3.1	4	0.7	7	1.2	552	94.0
Wildlife Biology	1772	317	17.9	97	5.5	16	16.5	8	0.5	41	2.3	21	1.2	27	1.5	1675	94.5
Animal Science	131	12	9.2	5	3.8	0	0.0	2	1.5	2	1.5	1	0.8	0	0.0	126	96.2
TOTALS	36423	5908	16.2	3653	10.0	770	21.1	1284	3.5	952	2.6	978	2.7	439	1.2	32770	90.0

FIELD: Health Sciences

SOURCE: Doctorate Records File and Doctorate Recipients from United States Universities, Summary Reports, 1972-1988, National Research Council

TABLE 8-7

PhD AWARDS IN THE HEALTH SCIENCES BY SUBFIELD AND SEX, 1960 - 1988

	CY 1920-FY 1972			FY 1973-FY 1982			FY 1983-FY 1986			FY 1987			FY 1988		
SUBFIELD	Total	Women	%W	Total	Women	%W	Total	Women	%W	Total	Women	%W	Total	Women	%W
HEALTH SCIENCES SUBTOTAL	6,761	788	11.7	7,484	2,169	29.0	2850	1661	58.3	806	477	59.2	867	543	62.6
Audiology & Speech Pathology	504	127	25.2	1,376	427	31.0	398	257	64.6	107	75	70.1	93	61	65.6
Environmental Health (3)				192	41	21.4	148	44	29.7	29	9	31.0	52	18	34.6
Dentistry (2)	24	1	4.2												
Public Health							308	184	59.7	96	52	54.2	122	74	60.7
Epidemology							336	202	60.1	86	47	54.7	98	58	59.2
Public Health & Epidemiology	1,163	192	16.5	1,177	479	40.7									
Nursing (3)				354	339	95.8	678	655	96.6	214	203	94.9	246	235	95.5
Pharmacy	852	47	5.5	676	83	12.3	395	100	25.3	136	31	22.8	95	28	29.5
Hospital Administration (4)	68	4	5.9	26	1	3.8									
Optometry, Ophthalmology (2)	35	2	5.7												
Pharmacology	2,239	223	10.0	2,148	437	20.3									
Medicine & Surgery (6)	637	35	5.5	24	0	0.0									
Veterinary Medicine	497	6	1.2	340	37	10.9	183	49	26.8	31	5	16.1	48	17	35.4
Health Sciences, General (7)	89	12	13.5	223	46	20.6	75	22	29.3	19	8	42.1	23	11	47.8
Health Sciences, Other (7,8)	653	139	21.3	948	279	29.4	329	148	45.0	88	47	53.4	90	41	45.6

(1) Added in 1968 as "Speech & Hearing Sciences." Name changed to "Health Sciences: in 1983. (2) Dropped in 1961. Now included in "Health Sciences, Other." (3) Added in 1978. (4) Dropped in 1978. Now included in "Health Sciences, Other." (5) "Epidemiology" added in 1977. Two fields broken out in 1983. (6) Dropped as a separate field in 1977. (7) Added in 1962 as "Medical Sciences..." Name changed to "Health Sciences" in 1983. (8) Included "Psychiatry" which was dropped as a separate field in 1962.

FIELD: Medicine

SOURCE: Women in Engineering, Medicine and Science, by Vera Kistiakowsky, The Conference on Women in Science and Engineering, National Research Council, June 11-12, 1973; and Journal of the American Medical Association, Vol. 234, No. 13, December 1975; Vol. 243, No. 9, March 1980; and Vol. 246, No. 25, December 1981; copyright by AMA; and Office of Minority Affairs, Association of American Medical Colleges, 1985

TABLE 8-8

ENROLLMENTS AND GRADUATES IN UNITED STATES MEDICAL SCHOOLS FOR SELECTED YEARS, BY SEX

YEAR	No. of U.S. Med. Schools	Total Enroll-ment	Women Students		Total M.D. Grads.	Women Graduates	
			No.	% of Total		No.	% of Total
1914-15	96	14,891	583	4.2	3,536	92	2.6
1924-25	80	18,200	910	5.0	3,974	204	5.1
1934-35	77	22,888	1,077	4.7	5,101	207	4.1
1954-55	81	28,583	1,537	5.4	6,977	345	4.9
1964-65	88	32,428	2,503	7.7	7,409	503	6.8
1974-75	114	53,554	9,661	18.0	12,714	1,706	13.4
1979-80	126	63,800	16,315	25.4	15,135	3,497	23.1
1984-85	127	67,016	21,316	31.8	16,318	4,904	30.1

SOURCE: Journal of the American Medical Association, Vol. 238, No. 26, December 26, 1977; Vol. 243, No. 9, March 1980; Vol. 246, No. 25, December 25, 1981; Vol. 248, No. 24, December 24-31, 1982; "Medical School Enrollments, 1973-74 thru 1977-78"; "Undergraduate Medical Education," Vol. 250, No. 12, September 23-30, 1983; Journal of Medical Education, Vol. 53, April 1978: and personal communications with the Association of American Medical Colleges

TABLE 8-9

APPLICANTS, FIRST YEAR, AND TOTAL ENROLLMENTS AND GRADUATES IN UNITED STATES MEDICAL SCHOOLS BY SEX, 1968-69 - 1988-89

YEAR	APPLICANTS			FIRST-YEAR ENROLLMENT			TOTAL ENROLLMENT			GRADUATES		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
1968-69	21,118	2,097	9.9	9,863	887	9.0	35,833	3,1365	8.8	8,049	607	7.5
1969-70	24,465	2,289	9.4	10,401	952	9.2	37,669	3,390	9.0	8,367	700	8.4
1970-71	24,987	2,734	10.9	11,348	1,256	11.1	40,487	3,894	9.6	8,974	827	9.2
1971-72	29,172	3,737	12.8	12,261	1,693	13.7	43,650	4,755	10.9	8,551	860	9.0
1972-73	36,135	5,480	15.2	13,726	2,315	16.9	47,546	6,099	12.8	10,391	924	8.9
1973-74	40,506	7,202	17.8	14,185	2,743	19.6	45,886	7,731	15.4	11,613	1,264	11.1
1974-75	42,624	8,712	20.4	14,963	3,260	22.3	54,074	9,786	18.1	12,714	1,706	13.4
1975-76	42,303	9,575	22.6	15,351	3,656	23.8	56,244	11,527	20.5	13,561	2,200	16.2
1976-77	42,155	10,244	24.3	15,667	3,876	24.7	58,266	13,059	22.4	13,607	2,611	19.2
1977-78	40,569	10,195	25.1	16,136	4,130	25.6	60,039	14,218	23.7	14,393	3,086	21.4
1978-79	36,636	9,561	26.1	16,620	4,184	25.2	62,213	15,293	24.4	14,966	3,445	23.0
1979-80	36,141	10,222	28.3	16,886	4,748	27.9	63,800	16,315	25.4	15,135	3,497	23.1
1980-81	36,100	10,644	29.5	17,204	4,970	28.9	65,497	17,373	26.5	15,667	3,892	24.8
1981-82	36,727	11,673	31.8	17,320	5,343	30.8	66,485	18,555	27.9	15,985	3,991	25.0
1982-83	35,730	11,685	32.7	17,230	5,445	31.6	66,886	19,627	29.3	15,728	4,193	26.7
1983-84	35,200	11,961	34.0	17,150	5,653	33.0	67,327	20,635	30.6	16,343	4,632	28.3
1984-85	35,944	12,476	34.7	16,997	5,715	33.6	67,016	21,316	31.8	16,318	4,904	30.1
1985-86	32,893	11,562	35.1	16,963	5,800	34.2	66,585	21,650	32.5	16,117	4,957	30.8
1986-87	31,323	11,267	36.0	16,819	5,894	35.0	66,125	22,100	33.4	15,830	5,107	32.3
1987-88	28,123	10,546*	37.5	16,686	6,098	36.5	65,735	22,481*	34.2	15,919	5,215	32.8
1988-89	26,721	10,180*	38.1	16,781	6,254	37.3	65,300	22,855*	35.0			

*Calculated

FIELD: Medicine

SOURCE: Journal of the American Medical Association, Vol. 234, No. 13, Dec. 29, 1975, Vol. 238, No. 26, Dec. 26, 1977, Vol. 240, No. 26, Dec. 22, 1978, Vol. 243, No. 9, March 1980, Vol. 246, No. 25, Dec. 25, 1981, Vol. 248, No. 24, Dec. 24, 1982, Vol. 250, No. 12, September 23, 1983. Copyright by A.M.A. Fact sheets dated 2/28/85 and 10/18/85, and Minority Students in Medical Education: Facts and Figures V, Association of American Medical Colleges, June 1989

TABLE 8-10

MINORITY GRADUATES IN MEDICINE, SELECTED YEARS, 1969-70 - 1988-89

YEAR		Black		Am. Indian/ Alaskan Nat.		Mexican American		Puerto Rican		Asian/ Pacific Isl.	
	Total No.	No.	H %	No.	H %	No.	H %	No.	H %	No.	H
1969-70	8,367	165	2.0	4	0.05	10	0.1	9	0.1		
1972-73	10,391	341	3.3	8	0.08	39	0.4	10	0.1		
1974-75	12,714	638	5.0	22	0.2	110	0.9	28	0.2		
1976-77	13,607	752	5.5	29	0.2	144	1.1	38	0.3		
1977-78	14,393	793	5.5	47	0.3	172	1.2	176	1.2	319	2.2
1978-79	14,966	774	5.2	49	0.3	194	1.3	190	1.3	350	2.4
1980-81	15,667	773	4.9	43	0.3	201	1.3	223	1.4	414	2.7
1981-82	15,985	763	5.0	45	0.3	225	1.4	222	1.4	459	2.9
1982-83	15,802	883	5.6	45	0.3	228	1.4	289	1.8	483	3.1
1983-84	**16,343**	**818**	**5.0**	**59**	**0.4**	**220**	**1.3**	**302**	**1.8**	**679**	**4.2**
Women	4,632	378	8.2	20	0.4	59	1.3	100	2.2	217	4.7
Men	11,711	440	3.8	39	0.3	161	1.4	202	1.7	462	3.9
1984-85	**16,318**	**837**	**5.1**	**65**	**0.4**	**242**	**1.5**	**318**	**1.9**	**750**	**4.6**
Women	4,904	378	7.7	18	0.4	77	1.6	97	2.0	238	4.8
Men	11,414	456	4.0	47	0.4	165	1.5	221	1.9	512	4.5
1985-86	**16,117**	**824**	**5.1**	**49**	**0.3**	**233**	**1.4**	**89**	**0.6**	**909**	**5.6**
Women	4,957	350	7.1	15	0.3	72	1.5	37	0.7	295	5.9
Men	11,160	474	4.2	34	0.3	161	1.4	52	0.5	614	5.5
1986-87	**15,830**	**920**	**5.2**	**63**	**0.4**	**226**	**1.4**	**81**	**0.5**	**947**	**6.0**
Women	5,107	362	7.1	30	0.6	79	1.5	28	0.5	324	6.3
Men	10,723	458	4.3	33	0.3	147	1.4	53	0.5	623	5.9
1987-88	**15,919**	**850**	**5.3**	**58**	**0.4**	**241**	**1.5**	**112**	**0.7**	**1,119**	**7.0**
Women	5,215	409	7.7	20	0.4	67	1.3	43	0.8	393	7.5
Men	10,704	441	4.1	38	0.4	174	1.6	69	0.6	726	6.8

FIELD: Medicine

SOURCE: Minorities and Women in the Health Fields, Bureau of Health Resources Development, Public Health Service, May 1974; and Minority Students in Medical Education: Facts and Figures V, Association of American Medical Colleges Office of Minority Affairs, 1989

TABLE 8-11

FIRST YEAR

FIRST YEAR AND TOTAL ENROLLMENT IN U.S. MEDICAL SCHOOLS BY MINORITY GROUP FOR SELECTED YEARS, 1971-71 - 1988-89

				Black American				American Indian				Mexican American				Mainlnd Puerto Rican				Other Hispanic				Asian/Pacific Is				Total Minority			
YEAR	Total	Women	%W	No.	%B	Women	%W	No.	%AI	Women	%W	No.	%MA	Women	%W	No.	%PR	Women	%W	No.	%H	Women	%W	No.	%PI	Women	%W	No.	%M	Women*	%W
1971-72	12361	1693	13.7	882	7.1	200	22.6	23	0.2	8	34.8	118	1.0	10	8.5	40	0.3	6	15.0					217	1.8	42	19.4	1280	10.3	266	20.8
1974-75	14763	3260	22.1	1106	7.5			71	0.5			227	1.5			69	0.5							275	1.9			1748	11.8		
1975-76	15295	3647	23.8	1036	6.8	376	36.2	60	0.4	21	35.0	224	1.5	46	20.5	71	0.5	24	33.8	41	0.3	9	22.0	282	1.8	86	30.5	1714	11.2	562	32.8
1977-78	16136	4130	25.6	1085	6.7	443	40.8	51	0.3	15	29.4	246	1.5	66	26.8	68	0.4	23	33.8	157	1.0	43	27.4	395	2.4	115	29.1	2002	12.4	705	35.2
1978-79	16501	4173	25.3	1061	6.4	446	42.0	47	0.3	12	25.5	260	1.6	66	25.4	75	0.5	32	42.7					452	2.7			1895	11.4	556	29.3
1979-80	16930	4713	27.8	1108	6.5	495	44.6	63	0.4	16	25.4	290	1.7	74	25.5	86	0.5	30	34.9	188	1.1	59	31.4	502	3.0	154	30.7	2237	13.2	828	37.0
1980-81	17186	4996	29.1	1128	6.6	513	45.4	67	0.4	24	35.8	258	1.5	79	30.6	95	0.6	41	43.2	224	1.3			572	3.3			2344	13.6	657	28.0
1981-82	17268	5317	30.8	1196	6.9	517	43.2	70	0.4	19	27.1	300	1.7	91	30.3	105	0.6	46	43.8	247	1.4			765	4.4			2683	15.5	673	25.1
1982-83	17254	5462	31.7	1145	6.6	495	43.2	62	0.4	26	41.9	305	1.8	91	29.8	114	0.7	41	36.0	278	1.6			936	5.4			2840	16.4	653	23.0
1983-84	17150	5653	33.0	1173	6.8	544	46.3	75	0.4	38	50.7	301	1.8	102	33.9	109	0.6	44	40.4	248	1.4	76	30.6	983	5.7	337	34.3	2889	16.8	1141	39.5
1984-85	16997	5715	33.6	1148	6.8	563	49.0	77	0.5	27	35.1	329	1.9	93	28.3	118	0.7	48	40.7	243	1.4	79	32.5	1124	6.6			3039	17.8	810	26.7
1985-86	16963	5800	34.2	1117	6.6	582	52.1	60	0.4	30	50.0	331	2.0	117	35.3	136	0.8	51	37.5	259	1.5			1295	7.6	441	34.1	3198	18.8	1221	38.2
1986-87	16819	5894	35.0	1174	7.0	600	51.1	61	0.4	25	41.0	331	2.0	121	36.6	111	0.7	45	40.5	276	1.6			1514	9.0			3467	20.6	791	22.8
1987-88	16713	6095	36.5	1221	7.3	665	54.4	68	0.4	29	42.6	308	1.8	109	35.4	116	0.7	41	35.3	283	1.7			1827	10.9			3823	22.8	844	22.1
1988-89	16868	6254	37.1	1210	7.2	668	55.2	76	0.5	42	55.3	295	1.7	120	40.7	127	0.8	59	46.5	288	1.7			2100	12.4			4096	24.2	889	21.7
ALL YEARS																															
1971-72	43650	4755	10.9	2055	4.7	420	20.4	42	0.1	10	23.8	252	0.6	24	9.5	76	0.2	13	17.1					647	1.5	116	17.9	3072	7.03	583	19.0
1974-75	53554	9786	18.3	3355	6.3			157	0.3			638	1.2			172	0.3							959	1.8			5281	9.86		
1975-76	55818	11417	20.5	3456	6.2	1157	33.4	172	0.3	45	26.2	699	1.3	129	18.5	197	0.4	51	25.9	144	0.3	35	24.3	1022	1.8	256	25.0	5690	10.1	1673	29.4
1977-78	60039	14218	23.7	3587	6.0	1371	38.2	201	0.3	55	27.4	831	1.4	189	22.7	261	0.4	89	34.1	426	0.7	99	23.2	1422	2.4	417	29.3	6728	11.2	2220	33.0
1978-79	62213	15293	24.6	3537	5.7			202	0.3			882	1.4			277	0.4							1592	2.6			6490	10.4		
1979-80	63800	16141	25.3	3627	5.7	1549	42.7	212	0.3	55	25.9	964	1.5	229	23.8	283	0.4	104	36.7	567	0.9	160	28.2	1777	2.8	518	29.2	7430	11.6	2615	35.2
1980-81	65189	17373	26.7	3708	5.7			221	0.3			951	1.5			329	0.5			603	1.0			1924	3.0			7816	11.9		
1981-82	66298	18555	28.0	3884	5.9			229	0.3			1040	1.6			350	0.5			847	1.3			2518	3.8			8860	13.3		
1982-83	66748	19627	29.4	3869	5.8			235	0.4			1071	1.6			369	0.6			962	1.4			2936	4.4			9442	14.1		
1983-84	67327	20635	30.6	3892	5.8	1748	44.9	258	0.4	95	36.8	1082	1.6	352	32.5	368	0.5	143	38.9	983	1.5	285	29.0	3290	4.9	1101	33.5	9873	14.6	3724	37.7
1984-85	67016	21316	31.8	3944	5.9			257	0.4			1126	1.7			380	0.6			987	1.5			3763	5.6			10457	15.6		
1985-86	66585	21350	32.1	3849	5.8	1796	46.6	235	0.4	95	40.4	1143	1.7	366	32.0	428	0.6	162	37.9	991	1.5	312	31.5	4289	6.4	316	7.4	10935	16.4	3047	27.9
1985-87	66125	22100	33.4	3892	5.9			242	0.4			1153	1.7			435	0.7			1015	1.5			4883	7.4			11620	17.5		
1987-88	65735			3968	6.0			233	0.4			1144	1.7			467	0.7			1038	1.6			5738	8.7			12508	19.1		
1988-89	65300			3995	6.1			237	0.4			1128	1.7			438	0.7			1091	1.7			6595	10.1			13404	20.6		

FIELD: Medicine

SOURCE: Journal of the American Medical Association, v. 234, No. 13, Dec. 29, 1975; v. 238, No. 26, Dec. 26, 1977; v. 240, No. 26, Dec. 22,1978; Minority Students in Medical Education: Facts and Figures V, Association of American Medical Colleges Office of Minority Affairs, 1989

TABLE 8-12

ENROLLED STUDENTS REPEATING CLASSES - SELECTED YEARS - 1973-74 - 1987-88

FIRST YEAR CLASS

	Total Minority			Black Americans			American Indian			Mexican Amer			Puerto Rican*			Other Hispanic			Asian/Pacific Is			All Other Student		
YEAR	Total	Rep	%	Total	Rep	%	Total	Rep	%	Total	Rep	%	Total	Rep	%	Total	Rep	%	Total	Rep	%	Total	Rep	%
1973-74	1270	144	11.3	995	120	12.1	41	8	19.5	178	8	4.5	56	8	14.3							12642	142	1.1
1975-76	1419	192	13.5	1052	159	15.1	61	4	6.6	228	21	9.2	78	8	10.3							13808	157	1.1
1977-78	2220	188	8.5	1101	142	12.9	51	5	9.8	238	22	9.2	231	2	0.9	174	10	5.7	425	7	1.6	13914	225	1.6
1979-80	2518	225	8.9	1117	157	14.1	59	4	6.8	285	25	8.8	345	22	6.4	190	7	3.7	522	10	1.9	14496	287	2.0
1980-81	2566	276	10.8	1127	195	17.3	69	10	14.5	259	30	11.6	306	21	6.9	222	9	4.1	583	11	1.9	14638	288	2.0
1981-82	2808	286	10.2	1171	198	16.9	73	6	8.2	289	27	9.3	353	21	5.9	229	15	6.6	693	19	2.7	14512	324	2.2
1982-83	2903	269	9.3	1083	171	15.8	62	7	11.3	293	31	10.6	343	30	8.7	263	14	5.3	859	16	1.9	14327	297	2.1
1983-84	2895	287	9.9	1096	184	16.8	75	8	10.7	284	38	13.4	341	23	6.7	232	10	4.3	867	24	2.8	14280	316	2.2
1984-85	2999	262	8.7	1045	166	15.9	79	6	7.6	303	36	11.9	352	19	5.4	233	11	4.7	987	24	2.4	13953	271	1.9
1985-86	3198	312	9.8	1117	194	17.4	60	8	13.3	331	39	11.8	136	15	11.0	259	9	3.5	1295	47	3.6	13765	383	2.8
1986-87	3655	280	7.7	1157	171	14.8	58	6	10.3	321	37	11.5	348	25	7.2	272	10	3.7	1499	31	2.1	13123	293	2.2
1987-88	4107	301	7.3	1254	191	15.2	67	5	7.5	313	27	8.6	337	18	5.3	281	22	7.8	1855	38	2.0	12765	383	3.0

ALL OTHER CLASSES

	Total Minority			Black Americans			American Indian			Mexican Amer			Puerto Rican*			Other Hispanic			Asian/Pacific Is			All Other Student		
YEAR	Total	Rep	%	Total	Rep	%	Total	Rep	%	Total	Rep	%	Total	Rep	%	Total	Rep	%	Total	Rep	%	Total	Rep	%
1973-74	2478	128	5.2	1966	102	5.2	52	3	5.8	334	18	5.4	126	5	4.0							33477	202	0.6
1975-76	3176	181	5.7	2436	140	5.7	115	6	5.2	490	26	5.3	135	9	6.7							37306	262	0.7
1977-78	5246	235	4.5	2550	161	6.3	154	8	5.2	599	34	5.7	590	7	1.2	293	9	3.1	1060	16	1.5	39076	286	0.7
1979-80	5800	211	3.6	2546	128	5.0	135	13	9.6	675	29	4.3	708	15	2.1	413	4	1.0	1323	22	1.7	41381	291	0.7
1980-81	6003	221	3.7	2592	149	5.7	157	7	4.5	698	24	3.4	744	15	2.0	442	6	1.4	1370	20	1.5	42290	313	0.7
1981-82	6495	233	3.6	2620	159	6.1	161	5	3.1	713	23	3.2	840	19	2.3	573	9	1.6	1588	18	1.1	42670	295	0.7
1982-83	6951	270	3.9	2646	153	5.8	171	5	2.9	741	34	4.6	930	33	3.5	650	14	2.2	1813	31	1.7	42705	263	0.6
1983-84	7224	246	3.4	2583	144	5.6	182	8	4.4	753	39	5.2	956	17	1.8	683	12	1.8	2067	26	1.3	43044	328	0.8
1984-85	7553	252	3.3	2618	148	5.7	175	14	8.0	750	12	1.6	946	32	3.4	705	10	1.4	2359	36	1.5	42545	306	0.7
1985-86	7756	294	3.8	2526	165	6.5	169	11	6.5	739	31	4.2	937	31	3.3	715	17	2.4	2670	39	1.5	41919	288	0.7
1986-87	8798	281	3.2	2695	164	6.1	185	6	3.2	799	30	3.8	1003	13	1.3	748	15	2.0	3368	53	1.6	40565	329	0.8
1987-88	9628	305	3.2	2832	151	5.3	168	4	2.4	833	34	4.1	1031	22	2.1	766	21	2.7	3998	73	1.8	39428	355	0.9

* Mainland only before 1977-78, then Mainland and Commonwealth.

FIELD: Medicine

SOURCE: *Minorities and Women in the Health Fields*, Bureau of Health Resources Development, Public Health Service, May 1974; and *Minority Students in Medical Education: Facts and Figures V*, Association of American Medical Colleges Office of Minority Affairs, 1989

TABLE 8-13

M.D. DEGREES AWARDED TO U.S. WOMEN, BY MINORITY STATUS, 1980-1988

YEAR	Number Degrees	Black		Indian		Mexican		Puerto Rican		Minority*		Asian	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1980	3,526	308	8.7	7	0.2	40	1.1	31	0.9	386	10.9		
1981	3,902	343	8.8	12	0.3	51	1.3	20	0.5	426	10.9		
1982	4,007	348	8.7	12	0.3	59	1.5	31	0.8	450	11.2		
1983	4,232	388	9.2	12	0.3	53	1.3	25	0.6	478	11.3		
1984	4,632	379	8.2	20	0.4	59	1.3	32	0.7	490	10.6	217	4.7
1985	4,904	372	7.6	18	0.4	77	1.6	38	0.8	505	10.3	238	4.9
1986	4,957	350	7.1	15	0.3	72	1.5	37	0.7	474	9.6	295	6.0
1987	5,107	362	7.1	30	0.6	76	1.5	28	0.5	499	9.8	324	6.3
1988	5,215	409	7.8	20	0.4	67	1.3	43	0.8	624	12.0	393	7.5
TOTAL	40,482	3,259	8.1	146	0.4	554	1.4	285	0.7	4,332	10.7	1,467	10.1

*Excludes Asians

TABLE 8-14

ETHNIC BACKGROUND OF RESIDENTS ON DUTY, SEPTEMBER 1, 1983 - 1987

YEAR	Total	Black		Indian		Mex. Am.		Puerto R.		Other Hispa		Asian		White	
		No.	% B	No.	% I	No.	% M	No.	% P	No.	% M	No.	% A	No.	% W
1983	71,374	3,379	4.7	111	0.2	743	1.0	1,346	1.9	1,587	2.2	5,632	7.9	58,576	82.1
1984	74,085	3,506	4.7	130	0.2	750	1.0	1,385	1.9	1,587	2.1	5,709	7.7	61,018	82.4
1985	74,098	3,322	4.5	128	0.2	731	1.0	1,292	1.7	1,519	2.0	5,618	7.6	61,488	83.0
1986	76,354	3,453	4.5	86	0.1	740	1.0	1,229	1.6	1,807	2.4	5,821	7.6	63,218	82.8
1987	80,906	3,897	4.8	196	0.2	866	1.1	1,324	1.6	1,911	2.4	6,866	8.5	65,846	81.4
TOTAL	376,817	17,557	4.6	651	0.2	3,830	1.0	6,576	1.8	8,411	2.2	29,646	7.7	310,146	82.6

FIELD: Medicine

SOURCE: Minorities and Women in the Health Fields, Bureau of Health Resources Development, Public Health Service, May 1974; and Minority Students in Medical Education: Facts and Figures V, Association of American Medical Colleges Office of Minority Affairs, 1989

TABLE 8-15

U.S. MEDICAL SCHOOL FACULTY BY SEX AND ETHNIC ORIGIN, SELECTED YEARS, 1975 - 1988

	Total*			Black				Indian				Mexican American				Puerto Rican				Other Hispanic				Asian				White			
YEAR	No.	Women	% W	No.	% B	Wom	% W	No.	% I	W	% W	No.	% M	Wo	% W	No.	% P	Wo	% W	No.	% H	Wom	% W	No.	% A	Wom	% W	No.	% Wh	Wom	% W
1975	40578	6119	15.1	733	1.8	197	26.9	14	0.0	2	14.3	74	0.2	10	13.5	275	0.7	65	23.6	566	1.4	67	11.8	2383	5.9	443	18.6	33309	82.1	4883	14.7
1978	47140	7153	15.2	820	1.7	201	24.5	22	0.0	2	9.1	89	0.2	13	14.6	320	0.7	75	23.4	621	1.3	77	12.4	2824	6.0	560	19.8	38641	82.0	5681	14.7
1981	47701	7822	16.4	810	1.7	246	30.4	37	0.1	7	18.9	105	0.2	17	16.2	311	0.7	93	29.9	686	1.4	105	15.3	3319	7.0	755	22.7	39232	82.2	6109	15.6
1985	52464	9285	17.7	950	1.8	307	32.3	47	0.1	9	19.1	124	0.2	15	12.1	323	0.6	100	31.0	788	1.5	137	17.4	3783	7.2	883	23.3	43564	83.0	7274	16.7
1986	57803	10583	18.3	1040	1.8	344	33.1	47	0.1	10	21.3	129	0.2	17	13.2	443	0.8	123	27.8	833	1.4	147	17.6	4061	7.0	951	23.4	46763	80.9	8142	17.4
1988	60181	11673	19.4	1103	1.8	373	33.8	52	0.1	10	19.2	152	0.3	25	16.4	396	0.7	110	27.8	914	1.5	173	18.9	4437	7.4	1082	24.4	49441	82.2	9112	18.4
TOTAL	305867	52635	17.2	5456	1.8	1668	30.6	219	0.1	40	18.3	673	0.2	97	14.4	2068	0.7	566	27.4	4408	1.4	706	16.0	20807	6.8	4674	22.5	250950	82.0	41201	16.4

* Includes those whose race or ethnic origin in unknown.

FIELD: Health Professions

SOURCE: Sixth Report to the President and Congress on the Status of Health Personnal in the U.S., Health Resources and Services Administration, 1988

TABLE 8-16

NUMBER OF ACTIVE HEALTH PERSONNEL BY OCCUPATION AND SEX, 1986 AND PROJECTED TO 2020

	Veterinarians			Pharmacists			Optometrists			Dentists			Physicians		
YEAR	TOTAL	WOMEN	% W	TOTAL	WOMEN	% W	TOTAL	WOMEN	% W	TOTAL	WOMEN	% W	TOTAL	WOMEN	% W
1986	43,500	8,000	18.4	161,500	42,400	26.3	24,300	2,400	9.9	143,000	9,000	6.3	544,830	81,640	15.0
1990	50,100	12,400	24.8	171,900	54,000	31.4	25,600	3,800	14.8	150,300	13,500	9.0	597,040	103,500	17.3
2000	64,200	23,800	37.1	198,600	83,700	42.1	30,100	7,600	25.2	156,300	24,600	15.7	708,600	161,130	22.7
2010	75,400	34,300	45.5	221,800	110,000	49.6	34,200	11,000	32.2	154,700	34,900	22.6	746,300	196,280	26.3
2020	81,300	42,300	52.0	233,700	125,700	53.8	35,700	12,900	36.1	145,800	42,900	29.4	820,810	246,740	30.1

SOURCE: Minorities and Women in the Health Fields, Bureau of Health Resources Development, Public Health Service, May 1974; and Annual Report 1981 through 1989, American Association of Colleges of Osteopathic Medicine.

TABLE 8-17

APPLICANTS, FIRST YEAR AND TOTAL ENROLLMENTS AND GRADUATES IN OSTEOPATHIC MEDICINE BY SEX, 1977-68 - 1988-89

	Applicants			1st Yr. Enrollment			Total Enrollment			Graduate		
YEAR	Total	Women	%W	Total	Women	%W	Total	Women	%W	Total	Women	%W
1977-78	3918	559	14.3	1163	192	16.5	3926	570	14.5	971	68	7.0
1978-79	3530	610	17.3	1322	222	16.8	4221	688	16.3	1004	163	16.2
1979-80	3856	765	19.8	1426	265	18.6	4571	789	17.3	1059	192	18.1
1980-81	3786	804	21.2	1496	329	22.0	4940	971	19.7	1151	202	17.5
1981-82	3885	901	23.2	1582	378	23.9	5304	1108	20.9	1017	186	18.3
1982-83	3917	965	24.6	1682	428	25.4	5822	1317	22.6	1317	261	19.8
1983-84	4045	1092	27.0	1746	460	26.3	6212	1526	24.6	1287	262	20.4
1984-85	4126	1168	28.3	1750	511	29.2	6547	1707	26.1	1474	344	23.3
1985-86	3869	1102	28.5	1760	515	29.3	6671	1768	26.5	1560	392	25.1
1986-87	3514	1109	31.6	1724	471	27.3	6640	1853	27.9	1587	412	26.0
1987-88	3030	966	31.9	1692	490	29.0	6586	1904	28.9	1572	438	27.9
1988-89	3160	1068	33.8	1780	571	32.1	6614	1986	30.0	1617	485	30.0
TOTALS	44636	11109	24.9	26308	5477	20.8	91997	17837	19.4	21094	3675	17.4

TABLE 8-18

FIRST YEAR AND TOTAL ENROLLMENTS IN U.S. OSTEOPATHIC COLLEGES BY MINORITY GROUP, 1978-69 - 1988-89

YEAR	Total	Black	%B	Americn Indian	%I	Hispanic	%H	UnderRepMin No.	%	Asian	%A	Total Minor	%M
	FIRST YEAR ENROLLMENT												
1978-79	1,322	31	2.3	10	0.8	17	1.3	58	4.4	16	1.2	74	5.6
1979-80	1,426	40	2.8	6	0.4	18	1.3	64	4.5	30	2.1	94	6.6
1980-81	1,496	43	2.9	8	0.5	18	1.2	69	4.6	30	2.0	99	6.6
1981-82	1,584	37	2.3	12	0.8	22	1.4	71	4.5	33	2.1	104	6.6
1982-83	1,682	38	2.3	10	0.6	33	2.0	81	4.8	46	2.7	127	7.6
1983-84	1,746	49	2.8	13	0.7	38	2.2	100	5.7	52	3.0	152	8.7
1984-85	1,750	42	2.4	17	1.0	54	3.1	113	6.5	47	2.7	160	9.1
1985-86	1,737	37	2.1	10	0.6	68	3.9	115	6.6	70	4.0	185	10.7
1986-87	1,724	26	1.5	9	0.5	56	3.2	91	5.3	73	4.2	164	9.5
1987-88	1,692	38	2.2	7	0.4	60	3.5	105	6.2	108	6.4	213	12.6
1988-89	1,780	85	4.8	8	0.4	81	4.6	174	9.8	137	7.7	311	17.5
TOTALS	17,939	466	2.6	110	0.6	465	2.6	1,041	5.8	642	3.6	1,683	9.4
	TOTAL ENROLLMENT												
1978-79	4,221	46	1.1	24	0.6	11	0.3	81	1.9	45	1.1	126	3.0
1979-80	4,571	100	2.2	26	0.6	45	1.0	171	3.7	70	1.5	241	5.3
1980-81	4,940	94	1.9	19	0.4	52	1.1	165	3.3	87	1.8	252	5.1
1981-82	5,304	104	2.0	26	0.5	62	1.2	192	3.6	109	2.1	301	5.7
1982-83	5,882	116	2.0	25	0.4	81	1.4	222	3.8	133	2.3	355	6.0
1983-84	6,212	122	2.0	39	0.6	98	1.6	259	4.2	152	2.4	411	6.6
1984-85	6,547	126	1.9	50	0.8	126	1.9	302	4.6	166	2.5	468	7.1
1985-86	6,608	125	1.9	48	0.7	158	2.4	331	5.0	202	3.1	533	8.1
1986-87	6,640	117	1.8	42	0.6	182	2.7	341	5.1	242	3.6	583	8.8
1987-88	6,586	122	1.9	36	0.5	208	3.2	366	5.6	287	4.4	653	9.9
1988-89	6,614	159	2.4	33	0.5	240	3.6	432	6.5	381	5.8	813	12.3
TOTALS	64,125	1,231	1.9	368	0.6	1,263	2.0	2,862	4.5	1,874	2.9	4,736	7.4

FIELD: Dentistry

SOURCE: Women's Participation in First-Professional Degree Programs in Medicine, Dentistry, Veterinary Medicine and Law, 1969-70 through 1974-75, NCES 76-023; Annual Report on Dental Education Series 1975-76 - 1987-88, American Dental Association

TABLE 8-19

APPLICANTS, ENROLLMENTS, GRADUATES, U.S. DENTAL SCHOOLS, BY SEX, 1989-69 THRU 1988-89

				1st YEAR ENROLLMENT			TOTAL ENROLLMENT			GRADUATES		
	Total	Women	%W	Total	Women	%W	Total	Women	%W	Total	Women	%W
1968-69				4,203	46	1.1	15,408	167	1.1	3,457	36	1.0
1969-70	10,325	120	1.2	4,354	69	1.6	16,136	227	1.4	3,748	36	1.0
1970-71	10,410	160	1.5	4,639	103	2.2	16,510	274	1.7	3,777	46	1.2
1971-72	11,102	302	2.7	5,103	160	3.1	17,433	355	2.0	3,894	46	1.2
1972-73	13,478	506	3.8	5,337	224	4.2	18,376	511	2.8	3,961	40	1.0
1973-74	14,820	727	4.9	6,123	423	6.9	19,215	892	4.6	4,478	88	2.0
1974-75	14,850	1,193	8.0	5,828	638	10.9	20,163	1,403	7.0	4,513	92	2.0
1975-76	15,734	*		5,763	707	12.3	20,767	1,861	9.0	4,969	156	3.1
1976-77	14,807	*		5,935	802	13.5	21,013	2,349	11.2	5,336	248	4.6
1977-78	12,835	*		5,954	880	14.8	21,510	2,796	13.0	5,177	369	7.1
1978-79	11,753	*		6,301	1,000	15.9	22,176	3,112	14.0	5,324	634	11.9
1979-80	10,520	*		6,132	1,076	17.5	22,482	3,482	15.5	5,424	634	11.7
1980-81	9,601	1,960	20.4	6,030	1,194	19.8	22,842	3,879	17.0	5,256	715	13.6
1981-82	8,852	1,861	21.0	5,955	1,268	21.3	22,621	4,227	18.7	5,550	825	14.9
1982-83	7,724	1,722	22.3	5,498	1,223	22.2	22,235	4,457	20.0	5,371	838	15.6
1983-84	7,124	1,779	25.0	5,371	1,313	24.4	21,428	4,733	22.1	5,274	1,089	20.6
1984-85	6,490	*		5,047	1,369	27.1	20,588	4,899	23.8	5,371	1,063	19.8
1985-86	6,216	*		4,843	1,324	27.3	19,563	4,944	25.3	4,958	1,094	22.1
1986-87	5,724	1,790	31.3	4,554	1,387	30.5	18,673	5,068	27.1	4,744	1,144	24.1
1986-88	5,398	*		4,370	1,410	32.3	17,885	5,253	29.4	4,581	1,263	27.6
1987-89	5,019	*		4,169	1,395	33.5	17,094	5,265	30.8			
TOTALS	202,702	NR	NR	111,509	18,011	16.2	414,118	60,154	14.5	95,163	10,456	11.0

* Not available. NR - Not Relevant

TABLE 8-20

FIRST-YEAR ENROLLMENT IN U.S. DENTAL SCHOOLS BY MINORITY GROUP FOR SELECTED YEARS, 1972-73 - 1988-89

		Black			Indian			Hispanic			Asian			All Minority		
YEAR	Total	Total	%B	Women	Total	%I	Women	Total	%H	Women	Total	%A	Women	Total	%M	Women
1972-73	5,287	266	5.0		5	0.1		56	1.1		138	2.6		465	8.8	
1977-78	5,954	296	5.0		10	0.2		110	1.8		225	3.8		641	10.8	
1978-79	6,235	280	4.5		16	0.3		122	2.0		263	4.2		681	10.9	
1979-80	6,066	274	4.5		19	0.3		163	2.7		289	4.8		745	12.3	
1980-81	6,030	283	4.7		12	0.2		160	2.7		317	5.3		772	12.8	
1981-82	5,855	299	5.1		21	0.4		183	3.1		373	6.4		876	15.0	
1982-83	5,498	289	5.3		16	0.3		187	3.4		387	7.0		879	16.0	
1983-84	5,274	276	5.2		19	0.4		172	3.3		406	7.7		873	16.6	
1984-85	5,047	299	5.9	135	17	0.3	4	264	5.2	106	465	9.2	154	1,045	20.7	399
1985-86	4,843	281	5.8	129	16	0.3	6	312	6.4	122	496	10.2	182	1,105	22.8	439
1986-87	4,554	286	6.3	135	9	0.2	4	316	6.9	128	499	11.0	194	1,110	24.4	461
1987-88	4,370	280	6.5	140	20	0.5	9	358	8.3	143	636	14.7	246	1,294	30.0	538
1988-89	4,196	288	6.9	138	21	0.5	5	316	7.6	122	681	16.4	269	1,306	31.5	534
TOTALS	69,107	3,697	5.3		201	0.3		2,719	3.9		5,175	7.5		11,792	17.1	

FIELD: Dentistry

SOURCE: Women's Participation in First-Professional Degree Programs in Medicine, Dentistry, Veterinary Medicine and Law, 1969-70 through 1974-75, NCES 76-023; Annual Report on Dental Education Series 1975-76 - 1987-88, American Dental Association and CHANGE Magazine, Sept/Oct 1989

TABLE 8-21

GRADUATES OF SCHOOLS OF DENTISTRY IN THE U.S. BY RACIAL/ETHNIC CATEGORY, 1970-71 THRU 1986-87

		Racial/Ethnic Category											
		Total Min*		Black		Amer. Indian		Hispanic		Asian		White	
Year	Total+ Graduates	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1970-71	3,598	137	3.8	53	1.5	1	0.0	9	0.3	62	1.7	3,461	96.2
1971-72	3,689	167	4.5	74	2.0	1	0.0	12	0.3	61	1.7	3,522	95.5
1972-73	4,191	241	5.8	110	2.6	1	0.0	25	0.6	73	1.7	3,950	94.2
1973-74	4,479	335	7.5	154	3.4	2	0.0	31	0.7	113	2.5	4,144	92.5
1974-75	4,933	368	7.5	187	3.8	5	0.1	33	0.7	107	2.2	4,565	92.5
1975-76	5,282	467	8.8	213	4.0	3	0.1	50	0.9	157	3.0	4,815	91.2
1976-77	5,138	408	7.9	204	4.0	16	0.3	70	1.4	118	2.3	4,649	90.5
1977-78	5,177	461	8.9	215	4.2	15	0.3	69	1.3	162	3.1	4,716	91.1
1978-79	5,424	485	8.9	182	3.4	18	0.3	77	1.4	208	3.8	4,833	89.1
1980-81	5,550	520	9.4	190	3.4	14	0.3	119	2.1	197	3.5	4,736	85.3
1981-82	5,378	564	10.5	214	4.0	14	0.3	90	1.7	246	4.6	4,986	92.7
1982-83	5,756	614	10.7	227	3.9	12	0.2	110	1.9	265	4.6	4,757	82.6
1983-84	5,337	571	10.7	200	3.7	12	0.2	144	2.7	215	4.0	4,703	88.1
1984-85	5,353	560	10.5	117	2.2	31	0.6	123	2.3	289	5.4	4,028	75.2
1985-86	4,957	795	16.0	195	3.9	10	0.2	208	4.2	382	7.7	4,162	84.0
1986-87	4,744	849	17.9	211	4.4	11	0.2	231	4.9	396	8.3	3,895	82.1
1987-88	4,581	921	20.1	227	5.0	14	0.3	221	4.8	459	10.0	3,660	79.9
TOTALS	83,567	8,463	10.1	2,973	3.6	180	0.2	1,622	1.9	3,510	4.2	73,582	88.1

+ For 1970-71 thru 1972-73, excludes University of Puerto Rico and two schools which did not report racial/ethnic data. * Includes "Other Minority" in 1971-72 thru 1975-76.

SOURCE: Annual Report on Dental Education, 1986-87, American Dental Association

TABLE 8-22

DENTAL FACULTY, 1986-87 AND 1988-89

	Total		Clinical		Science		Admin.		Total		Clinical		Science		Admin.		Change			
FACULTY	No.	%T	No.	%C	No.	%S	No.	%A	No.	%T	No.	%C	No.	%S	No.	%A	Tot	Clin	Sci	Adm
Total	6385		4611		1442		332		6098		4509		1296		293		-287	-102	-146	-39
Women	1561	24.4	1135	24.6	385	26.7	41	12.3	1584	26.0	1248	27.7	293	22.6	43	14.7	23	113	-92	2
Black	410	6.4	329	7.1	81	5.6			389	6.4	325	7.2	64	4.9			-21	-4	-17	
Men	320	5.0	257	5.6	63	4.4			295	4.8	245	5.4	50	3.9			-25	-12	-13	
Women	90	1.4	72	1.6	18	1.2			94	1.5	80	1.8	14	1.1			4	8	-4	
Hispanic	258	4.0	221	4.8	37	2.6			264	4.3	233	5.2	31	2.4			6	12	-6	
Men	204	3.2	176	3.8	28	1.9			203	3.3	180	4.0	23	1.8			-1	4	-5	
Women	54	0.8	45	1.0	9	0.6			61	1.0	53	1.2	8	0.6			7	8	-1	
Indian	28	0.4	21	0.5	7	0.5			32	0.5	22	0.5	10	0.8			4	1	3	
Men	25	0.4	19	0.4	6	0.4			27	0.4	19	0.4	8	0.6			2	0	2	
Women	3	0.0	2	0.0	1	0.1			5	0.1	3	0.1	2	0.2			2	1	1	
Asian	498	7.8	360	7.8	138	9.6			526	8.6	403	8.9	123	9.5			28	43	-15	
Men	409	6.4	285	6.2	124	8.6			429	7.0	321	7.1	108	8.3			20	36	-16	
Women	89	1.4	75	1.6	14	1.0			97	1.6	82	1.8	15	1.2			8	7	1	

SOURCE: Personal Communication, Association of American Veterinary Medical Colleges, July 1987; October 1989

TABLE 8-23

ENROLLMENTS AND GRADUATES IN U. S. SCHOOLS OF VETERINARY MEDICINE BY SEX AND MINORITY GROUP, 1986-87 and 1988-89

SEX AND	1986-87				1988-89			
	FIRST YR ENROLLM'T		TOTAL ENROLLMENT		FIRST YR ENROLLMENT		TOTAL ENROLLMENT	
MINORITY GROUP	No.	V %	No.	V %	No.	V %	No.	V %
TOTAL	2,273	100.0	8,887	100.0	2,195	100.0	8,558	100.0
Male	944	41.5	4,173	47.1	902	41.1	3,663	42.8
Female	1,329	58.5	4,714	53.0	1,293	58.9	4,895	57.2
TOTAL MINORITY	160	7.0	551	6.2	170	7.7	563	6.6
Male	61	2.7	244	2.7	63	2.9	227	2.7
Female	99	4.4	307	3.5	107	4.9	336	3.9
BLACK	65	2.9	202	2.3	64	2.9	200	2.3
Male	29	1.3	87	1.0	25	1.1	83	1.0
Female	36	1.6	115	1.3	39	1.8	117	1.4
HISPANIC	53	2.3	179	2.0	61	2.8	196	2.3
Male	18	0.8	91	1.0	23	1.0	86	1.0
Female	35	1.5	88	1.0	38	1.7	110	1.3
ASIAN/PAC ISL	32	1.4	122	1.3	32	1.4	120	1.4
Male	10	0.5	42	0.4	10	0.5	38	0.5
Female	22	1.0	80	0.9	22	1.0	82	0.9
NATIVE AMERICAN	10	0.4	48	0.5	13	0.6	47	0.5
Male	4	0.2	24	0.3	5	0.2	20	0.2
Female	6	0.2	24	0.3	8	0.4	27	0.3

*Less than .05 percent

TABLE 8-24

ENROLLMENTS AND GRADUATES IN U.S. SCHOOLS OF VETERINARY MEDICINE BY SEX, 1968-69 - 1988-89

YEAR	FIRST YEAR ENROLLMENT			TOTAL ENROLLMENT			GRADUATES		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
1968-69	1,327	120	9.0	4,779	362	7.6	1,006	56	5.6
1969-70	1,386	159	11.5	4,726	417	8.8	1,206	90	7.5
1970-71	1,439	158	11.0	4,716	444	9.4	1,252	98	7.8
1971-72	1,509	228	15.1	5,163	593	11.5	1,247	117	9.4
1972-73	1,760	327	18.6	5,439	745	13.7	1,299	133	10.2
1973-74	1,520	350	23.0	5,528	957	17.3	1,384	155	11.2
1974-75	1,792	453	25.3	5,985	1,220	20.4	1,415	225	15.9
1975-76	1,807	618	34.2	6,274	1,719	27.4	1,532	277	18.1
1976-77	1,856	598	32.2	6,571	1,805	27.5	1,586	362	22.8
1977-78	1,873	706	37.7	6,903	2,129	30.8	1,635	409	25.0
1978-79	2,086	766	36.7	7,312	2,471	33.8	1,704	499	29.3
1979-80	2,264	912	40.3	7,594	2,751	36.2	1,852	615	33.2
1980-81	2,237	987	44.1	8,154	3,220	39.4	1,931	702	36.3
1981-82	2,313	1,100	47.5	8,499	3,576	42.0	1,886	668	35.4
1982-83	2,247	1,124	50.0	8,682	4,028	46.4	2,012	822	40.9
1983-84	2,320	1,127	48.6	8,816	4,152	47.1	2,138	887	41.5
1984-85	2,327	1,140	49.0	8,917	4,376	49.1	2,149	1,038	48.3
1985-86	2,282	1,265	55.4	8,938	4,536	50.8	2,104	1,021	48.5
1986-87	2,273	1,329	58.5	8,887	4,714	53.0	2,104	1,021	48.6
1987-88	2,207	1,246	57.3	8,751	4,816	55.0	2,219	1,069	48.2
1988-89	2,195	1,293	58.9	8,558	4,895	57.2	2,212	1,007	45.5

FIELD: Veterinary Medicine

SOURCE: Personal Communication, Association of American Veterinary Medical Colleges

TABLE 8-25

FACULTY OF U.S. SCHOOLS AND COLLEGES OF VETERINARY MEDICINE, 1987 AND 1989

	Total No.	Total V%	Tenure Track (Asst. Prof. & Above) No.	Tenure Track (Asst. Prof. & Above) V%	Non-Tenure Track (Instructor & Lecturer) No.	Non-Tenure Track (Instructor & Lecturer) V%
1987						
Total	2,809	100.0	2,576	100.0	223	100.0
Men	2,409	85.8	2,266	88.0	143	64.1
Women	400	14.2	310	12.0	90	40.4
Minority	185	6.6	168	6.5	17	7.6
1989						
Total	2,903	100.0				
Men	2,397	82.6				
Women	506	17.4				
Minority	201	6.9				
	All	Men	Women	%Women		
Black	75	59	16	21.3		
Hispanic	25	21	4	16.0		
Asian	99	89	10	10.1		
Indian	2	2	0	0.0		

TABLE 8-26

AMVA* VETERINARIANS BY SEX, SELECTED YEARS, 1983-89

YEAR	TOTAL	WOMEN	%Wom
1983	37,715	5,265	14.0
1985	40,137	6,092	15.2
1986	43,456	8,117	18.7
1989	48,017	11,115	23.1
TOTAL	169,325	30,589	18.1

*The American Veterinary Medicine Association estimates its membership to include 80-85 percent of all veterinarians

FIELD: Optometry

SOURCE: Minorities and Women in the Health Fields, Bureau of Health Resources Development, 1987 and personal communication from the Association of Schools and Colleges of Optometry and surveys conducted by the Council on Optometric Education of the American Optometric Association.

TABLE 8-27

TOTAL ENROLLMENTS AND GRADUATES IN OPTOMETRY BY SEX, 1969-70 - 1988-89

	NUMBER OF STUDENTS					GRADUATES*		
YEAR	Total	Men	%Men	Women	%Wom	Total	Women	%Wom
1969-70	2,488	2,415	97.1	73	2.9	444	23	5.2
1970-71	2,831	2,749	97.1	82	2.9	530	12	2.3
1971-72	3,097	2,985	96.4	112	3.6	684	18	2.6
1972-73	3,328	3,158	94.9	170	5.1	692	17	2.5
1973-74	3,529	3,268	92.6	261	7.4	793	34	4.3
1974-75	3,679	3,328	90.5	351	9.5	809	39	4.8
1975-76	3,888	3,432	88.3	456	11.7	906	72	7.9
1976-77	4,023	3,491	86.8	532	13.2	923	103	11.2
1977-78	4,440	3,741	84.3	699	15.7	978	126	12.9
1978-79	4,436	3,679	82.9	757	17.1	916	140	15.3
1979-80	4,500	3,632	80.7	868	19.3	1,073	166	15.5
1980-81	4,540	3,555	78.3	985	21.7	1,096	204	18.6
1981-82	4,541	3,464	76.3	1,077	23.7	1,113	224	20.1
1982-83	4,561	3,388	74.3	1,173	25.7	1,120	246	22.0
1983-84	4,539	3,248	71.6	1,291	28.4	1,171	285	24.3
1984-85	4,460	3,069	68.8	1,391	31.2	1,117	306	27.4
1985-86	4,210	2,759	65.5	1,451	34.5	1,035		
1986-87	4,494	2,810	62.5	1,684	37.5	1,073		
1987-88	4,495	2,723	60.6	1,772	39.4	1,070		
1988-89	4,708	2,731	58.0	1,977	42.0			
TOTALS	80,787	63,625	78.8	17,162	21.2	17,543	2,015	11.5

* From 1974-85, this figure is full-time fourth year student enrollment

FIELD: Optometry

SOURCE: Minorities and Women in the Health Fields, Bureau of Health Resources Development, 1987 and personal communication from the Association of Schools and Colleges of Optometry and surveys conducted by the Council on Optometric Education of the American Optometric Association.

TABLE 8-28

ENROLLMENTS IN U.S. SCHOOLS OF OPTOMETRY BY SEX AND RACE/ETHNICITY, 1973-74 - 1988-89

	TOTAL		BLACK		SPANISH SURNAMED		AMERICAN INDIAN		ASIAN AMERICAN		WHITE AND ALL OTHERS	
YEAR	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1973-74	3,529		52	1.5	39	1.1	5	0.1	141	4.0	3292	93.3
1974-75	3,679		73	2.0	45	1.2	8	0.2	153	4.2	3400	92.4
1975-76	3,888		83	2.1	55	1.4	5	0.1	166	4.3	3579	92.1
1976-77	4,033		89	2.2	46	1.1	6	0.1	157	3.9	3735	92.6
1977-78	4,440		79	1.8	55	1.2	7	0.2	153	3.4	4146	93.4
1978-79	4,436		62	1.4	66	1.5	11	0.2	166	3.7	4131	93.1
1979-80	4,500		56	1.2	67	1.5	13	0.3	208	4.6	4156	92.4
1980-81	4,540		57	1.3	80	1.8	12	0.3	243	5.4	4148	91.4
1981-82	4,541		57	1.3	98	2.2	9	0.2	283	6.2	4094	90.2
Men	3,464	76.3	29	0.8	72	2.1	6	0.2	181	5.2	3176	91.7
Women	1,077	23.7	28	2.6	26	2.4	3	0.3	102	9.5	918	85.2
1982-83	4,561		76	1.7	107	2.3	19	0.4	296	6.5	4063	89.1
Men	3,388	74.3	38	1.1	74	2.2	13	0.4	181	5.3	3082	91.0
Women	1,173	25.7	38	3.2	33	2.8	6	0.5	115	9.8	981	83.6
1984-85	4,460		96	2.2	116	2.6	21	0.5	269	6.0	3958	88.7
1985-86	4,445		111	2.5	125	2.8	20	0.4	312	7.0	3877	87.2
1986-87	4,494		116	2.6	136	3.0	13	0.3	352	7.8	3877	86.3
Men	2,810	62.5	42	1.5	80	2.8	8	0.3	164	5.8	2516	89.5
Women	1,684	37.5	74	4.4	56	3.3	5	0.3	188	11.2	1361	80.8
1987-88	4,509		117	2.6	139	3.1	22	0.5	410	9.1	3821	84.7
Men	2,737	60.7	49	1.8	74	2.7	12	0.4	189	6.9	2413	88.2
Women	1,772	39.3	68	3.8	65	3.7	10	0.6	221	12.5	1408	79.5
1988-89	4,708		130	2.8	280	5.9	26	0.6	462	9.8	3810	80.9
Men	2,731	58.0	46	1.7	130	4.8	18	0.7	203	7.4	2334	85.5
Women	1,977	42.0	84	4.2	150	7.6	8	0.4	259	13.1	1476	74.7
TOTALS	64,714		1,249	1.9	1,443	2.2	204	0.3	3,731	5.8	58,087	89.8

FIELD: Pharmacy

SOURCE: Series of Earned Degrees Conferred, 1969-87, National Center for Education Statistics

TABLE 8-29

PHARMACY DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1968-69 - 1986-87

YEAR	BACHELORS Both Sexes	Women Only	% Women	MASTERS Both Sexes	Women Only	% Women	DOCTORATES Both Sexes	Women Only	% Women
1968-69	4,172	692	16.6	232	33	14.2	74	4	5.4
1969-70	4,543	853	18.8	229	38	16.6	79	11	13.9
1970-71	4,593	951	20.7	194	40	20.6	94	1	1.1
1971-72	4,668	1,088	23.3	221	49	22.2	101	8	7.9
1972-73	5,070	1,277	25.2	167	36	21.6	296	75	25.3
1973-74	5,773	1,560	27.0	240	44	18.3	132	16	12.1
1974-75	6,487	1,821	28.1	285	75	26.3	206	46	22.3
1975-76	7,018	2,137	30.5	307	60	19.5	82	8	9.8
1976-77	7,495	2,434	32.5	274	72	26.3	75	10	13.3
1977-78	7,468	2,712	36.3	320	91	28.4	96	13	13.5
1978-79	6,919	2,759	39.9	330	89	27.0	104	23	22.1
1979-80	7,122	2,919	41.0	380	117	30.8	89	16	18.0
1980-81	6,640	2,910	43.8	336	120	35.7	108	17	15.7
1981-82	6,367	2,930	46.0	368	135	36.7	127	21	16.5
1982-83	5,708	2,795	49.0	331	123	37.2	111	25	22.5
1983-84	5,480	2,706	49.4	333	118	35.4	153	48	31.4
1984-85	5,011	2,668	53.2	282	107	37.9	147	47	32.0
1985-86	5,130	2,766	53.9	277	103	37.2	185	49	26.5
1986-87	5,022	2,809	55.9	265	116	43.8	199	58	29.1
TOTALS	110,686	40,787	36.8	5,371	1,566	29.2	2,458	496	20.2

SOURCE: The Status of Women in Pharmaceutical Education, by Christopher A. Rodowskas, Jr., American Association of Colleges of Pharmacy; Doctorate Recipients from United States Universities, Summary Reports 1972-88, National Research Council

TABLE 8-30

DOCTORAL RECIPIENTS IN THE PHARMACEUTICAL SCIENCES BY SEX, 1920-1988

YEAR OF DOCTORATE	PHARMACY TOTAL	WOMEN	% WOMEN	PHARMACOLOGY TOTAL	WOMEN	% WOMEN	PHARMACEUTICAL CHEMISTRY TOTAL	WOMEN	% WOMEN
1920-29	11	1	9.1	22	2	11.0	5	0	0.0
1930-39	22	1	4.5	93	10	10.8	27	2	7.4
1940-49	18	1	5.5	190	7	3.7	47	4	8.5
1950-59	263	15	5.7	466	45	9.7	194	2	1.0
1960-69	366	21	5.7	958	98	10.2	471	18	3.8
1970-71	115	6	5.2	323	38	11.8	122	9	7.4
1971-72	57	2	3.5	187	23	12.3	48	8	16.7
1972-73	72	1	1.4	160	27	16.9	50	6	12.0
1973-74	61	5	8.2	178	35	19.7	62	6	9.7
1974-75	70	7	10.0	166	26	15.7	66	9	13.6
1975-76	63	9	14.3	205	25	12.2	55	9	16.4
1976-77	49	6	12.2	196	42	21.4	50	5	10.0
1977-78	61	9	14.8	198	12	6.1	51	5	9.8
1978-79	69	15	21.7	217	33	15.2	43	6	14.0
1979-80	70	9	12.9	257	60	23.3	52	15	28.8
1980-81	69	11	15.9	280	69	24.6	52	5	9.6
1981-82	81	12	14.8	276	76	27.5	55	11	20.0
1982-83	81	19	23.5	217	71	32.7	78	16	20.5
1983-84	102	28	27.5	237	60	25.3	56	15	26.8
1984-85	106	28	26.4	229	74	32.3	60	15	25.0
1985-86	106	25	23.6	240	79	32.9	58	17	29.3
1986-87	136	31	22.8	233	86	36.9	64	16	25.0
1987-88	95	28	29.5	249	91	36.6	73	19	20.3
TOTAL	**2,143**	**290**	**13.5**	**5,577**	**1,089**	**19.5**	**1,839**	**217**	**11.0**

FIELD: Pharmacy

SOURCE: Degrees Conferred by Schools and Colleges of Pharmacy 1986-87, and personal communication, American Association of Colleges of Pharmacy

TABLE 8-31

PHARMACY DEGREES CONFERRED BY LEVEL OF DEGREE, ETHNIC GROUP AND SEX, 1976 - 1988

YEAR	White American			Black American			Hispanic American			Asian American			American Indian			Foreign			Total(1)			
	M	F	%W	M	F	%B	M	F	%H	M	F	%A	M	F	%I	M	F	%F	M	F	Total	%F
Bachelor of Science and First Professional Degrees																						
1976	4623	1860	85	110	77	2	97	145	3	136	87	3	9	2	0.1	212	104	4	5278	2312	7590	30
1977	4851	2188	86	107	119	3	139	176	4	142	103	3	6	3	0.1	260	98	4	5510	2690	8200	33
1978	4522	2395	87	125	112	3	128	173	4	140	118	3	5	1	0.1	156	77	3	5093	2889	7982	36
1979	4158	2516	86	116	159	4	100	189	4	147	122	3	13	2	0.2	134	70	3	4677	3069	7746	40
1980	3985	2511	85	113	140	3	97	182	4	164	131	4	7	1	0.1	148	84	3	4541	3071	7612	40
1981	3603	2773	85	90	147	3	135	235	5	140	153	4	1	4	0.1	153	91	3	4127	3406	7533	45
1982	3233	2749	85	96	160	4	88	156	3	167	159	5	8	6	0.2	149	77	3	3753	3313	7066	47
1983	2810	2596	81	90	174	4	97	171	4	148	177	5	5	3	0.1	164	117	4	3370	3275	6645	49
1984	2469	2475	79	102	150	4	138	84	4	152	195	6	6	4	0.2	211	130	5	3183	3111	6294	49
1985	2228	2537	80	113	150	4	99	148	4	121	206	5	3	4	0.1	195	141	6	2764	3195	5959	54
1986	2162	2526	78	122	199	5	91	132	4	137	202	6	7	4	0.2	226	202	7	2745	3265	6010	54
1987	2084	2645	78	102	131	4	100	165	4	125	152	5	4	4	0.1	189	176	6	2612	3454	6066	57
1988	2089	2854	80	94	188	5	84	164	4	118	217	5	6	6	0.2	166	171	5	2567	3617	6184	58
Master of Science Degrees																						
1976	220	59	71	5	1	2	2	2	1	18	6	6				49	24	19	301	92	393	23
1977	227	64	73	3	2	1		1	0	14	4	5				62	19	20	309	90	399	23
1978	225	68	69	7	3	2		3	1	16	9	6				54	33	21	305	117	422	28
1979	228	81	71	7	3	2	2	1	1	17	9	6				42	40	19	301	134	435	31
1980	224	75	64	5	5	2	1	2	1	11	16	6				50	35	18	315	150	465	32
1981	197	113	70	8	9	4		2	0	6	8	3				64	31	22	271	163	434	38
1982	189	93	62	2	3	1	2	4	1	2	4	1	1		0.2	87	41	29	293	165	458	35
1983	183	99	66	1	1	0	1	3	1	6	4	2				59	30	21	277	149	426	35
1984	169	95	64	3	1	2	1	3	1	12	4	4				53	38	23	253	141	394	35
1985	124	81	64	2	8	3	2	1	1	8	3	3				63	35	29	210	128	338	38
1986	165	116	59	6		1	3	5	2	5	2	2	1		0.2	54	47	27	245	170	415	41
1987	136	95	66	2	4	2	2	2	1	3	8	3				43	39	24	197	151	348	42
1988	125	102	64	8	4	3	2	2	1	6	3	3		2		52	45	27	194	159	353	45
PhD Degrees																						
1976	109	10	62				1		1	7	5	6				38	7	24	163	26	189	14
1977	91	8	60	2		1	1		1	5		3		1	0.6	48	10	35	147	19	166	11
1978	106	10	65	1		1		1	1	5	1	5				40	8	27	158	20	178	11
1979	85	13	64	1		1				4	2	4				33	13	30	125	28	153	18
1980	96	16	59	3		2	1		1	10	2	6				43	15	31	155	34	189	18
1981	112	21	74	1		1	1		1	6	2	4				32	5	21	152	28	180	16
1982	105	21	69	1		1	1		1	2	1	2				36	14	27	146	36	182	20
1983	104	28	63				1		0	5	3	4				40	22	30	154	54	208	26
1984	105	30	59	2		1	5	2	3	11	2	6				45	19	28	174	53	227	23
1985	106	34	60	2		1	1	1	1	6	4	4	1		0.4	59	18	33	175	57	232	25
1986	112	48	62	2		1	1		0	4	2	2				73	18	35	192	68	260	26
1987	144	63	58	4		1	7	7	4	7	11	5				70	38	31	240	114	354	32
1988	97	48	55	1	1	1	3		1	4	2	2				32	23	40	180	75	263	29

(1) Includes other American minorities.

SOURCE: Enrollments in Schools and Colleges of Pharmacy, 1987-88 and Degrees Conferred by Schools and Colleges of Pharmacy 1986-87, American Association of Colleges of Pharmacy

TABLE 8-32

FINAL THREE YEAR ENROLLMENTS AND GRADUATES OF PHARMACY SCHOOLS BY SEX, 1968-69 - 1987-88

ACADEMIC YEAR	TOTAL	Men	Women	% W	BACHELOR GRADUATES TOTAL	Women	% W
1968-69*	14,753	12,069	2,684	18.2	4,031	656	16.3
1969-70	15,292	12,104	3,188	20.8	4,366	792	18.1
1970-71*	15,326	11,956	3,370	22.0	4,356	876	20.1
1971-72	16,808	12,621	4,187	24.9	4,416	997	22.6
1972-73	18,956	13,936	5,020	26.5	4,745	1,150	24.2
1973-74	21,287	15,258	6,029	28.3	5,414	1,415	26.1
1974-75	23,235	16,168	7,067	30.4	6,246	1,685	27.0
1975-76	24,416	16,303	8,113	33.2	6,994	2,057	29.4
1976-77	24,082	15,226	8,856	36.8	7,649	2541	33.2
1977-78	23,884	14,538	9,346	39.1	7,450	2,715	36.4
1978-79	23,078	13,636	9,442	40.9	7,095	2,835	40.0
1979-80	23,074	13,028	10,046	43.5	6,985	2,831	40.5
1980-81	22,093	11,839	10,254	46.4	6,908	3,144	45.5
1981-82	20,468	10,527	9,941	48.6	6,448	3,031	47.0
1982-83	19,350	9,511	9,839	50.8	5,919	2,925	49.4
1983-84	18,831	8,932	9,899	52.6	5,547	2,720	49.0
1984-85	16,872	7,722	9,150	54.2	5,144	2,788	54.2
1985-86	19,148	8,446	10,702	55.9	5,190	2,820	54.3
1986-87	20,073	8,446	11,627	57.9	5,164	2,929	56.7
1987-88	18,789	7,759	11,030	58.7			
TOTALS	399,815	240,025	159,790	40.0	110,067	40,907	37.2

* Excludes University of Puerto Rico.

TABLE 8-33

TOTAL ENROLLMENT IN PHARMACY BACHELOR OF SCIENCE PROGRAMS BY SEX AND MINORITY GROUP, FALL 1974 - 1988

	Black		Hispanic#		Indian		Asian		Foreign		Total Minority		
FALL	Men	Wom	Men	Wom	M	W	Men	Wom	Men	Wom	Men	Women	% Wom
1974	433	294	357	454	26	6	398	249	735	341	1,984	1,352	40.5
1975	488	427	418	510	26	10	407	278	728	289	2,127	1,549	42.1
1976	447	491	380	582	26	11	422	303	565	237	1,860	1,640	46.9
1977	453	531	344	627	32	7	420	341	522	288	1,799	1,814	50.2
1978	338	554	338	609	21	13	488	392	459	248	1,680	1,851	52.4
1979	410	548	339	585	23	13	510	461	476	238	1,793	1,875	51.1
1980	381	564	360	574	21	15	497	538	520	320	1,802	2,029	53.0
1981	378	554	303	484	25	13	464	576	518	541	1,721	2,201	56.1
1982	389	546	315	469	21	15	425	647	628	402	1,820	2,123	53.8
1983	419	600	318	469	20	22	446	676	638	456	1,872	2,273	54.8
1984	361	606	269	434	19	17	229	369	547	398	1,438	1,851	56.3
1986	474	997	323	567	14	21	352	642	726	649	1,889	2,876	60.4
1987	486	1,051	331	590	18	21	419	776	569	673	1,923	3,111	61.8
1988	517	1,178	323	574	21	39	504	915	660	683	2,045	3,389	62.4
TOTALS	5,974	8,941	4,718	7,526	313	223	5,981	7,163	8,411	5,763	25,753	29,934	53.8

Includes University of Puerto Rico

Source: Enrollments in Schools and Colleges of Pharmacy 1988-89, American Association of Colleges of Pharmacy

TABLE 8-34

FULL-TIME GRADUATE ENROLLMENTS BY PROGRAM TYPE, LEVEL, ETHNICITY AND SEX, FALL 1988

	Pharmaceutics/ Pharmacy				Pharm. Chem./ Pharmacognosy				Pharmachology				Pharmacy Administration				Pharmacy Practice				TOTALS(1)			
	MAs	%MAs	PhDs	%PhDs	MAs	%MAs	PhDs	%PhDs	MAs	%MAs	PhDs	%PhDs	MAs	%MAs	PhDs	%PhDs	MAs	%MAs	PhDs	%PhDs	MAs	%MAs	PhDs	%PhDs
WHITE	35	19.0	320	45.6	44	34.4	1100	181.2	85	54.8	234	62.7	79	64.2	46	57.5	55	74.3	15	78.9	298	44.9	1715	96.3
Men	18	18.2	176	42.0	27	36.0	189	47.1	47	60.3	145	67.4	45	71.4	29	60.4	34	85.0	9	75.0	171	25.8	548	30.8
Women	17	20.0	144	50.9	17	32.1	911	442.2	38	49.4	89	56.3	34	56.7	17	53.1	21	61.8	6	85.7	127	19.1	1167	65.5
BLACK	6	3.3	6	0.9	6	4.7	11	1.8	7	4.5	13	3.5	2	1.6	2	2.5	0	0.0	0		21	3.2	32	1.8
Men	2	2.0	2	0.5	4	5.3	7	1.7	3	3.8	5	2.3		0.0	1	2.1	0		0		9	1.4	15	0.8
Women	4	4.7	4	1.4	2	3.8	4	1.9	4	5.2	8	5.1	2	3.3	1	3.1	0	0.0	0		12	1.8	17	1.0
HISPANIC	1	0.5	11	1.6	1	0.8	7	1.2	1	0.6	8	2.1	3	2.4	2	2.5	1	1.4	0		7	1.1	28	1.6
Men	0	0.0	3	0.7	0	0.0	5	1.2	0		4	1.9	1	1.6	0		0		0		1	0.2	12	0.7
Women	1	1.2	8	2.8	1	1.9	2	1.0	1	1.3	4	2.5	2	3.3	2	6.3	1	2.9	0		6	0.9	16	0.9
ASIAN	9	4.9	24	3.4	7	5.5	30	4.9	2	1.3	14	3.8	3	2.4	3	3.8	1	1.4			15	2.3	68	3.8
Men	6	6.1	11	2.6	4	5.3	9	2.2	1	1.3	6	2.8	1	1.6	2	4.2	0		0		12	1.8	28	1.6
Women	3	3.5	13	4.6	3	5.7	21	10.2	1	1.3	8	5.1	2	3.3	1	3.1	1	2.9	0		10	1.5	43	2.4
INDIAN							4	0.7															4	0.2
Men	0		0		0		3	0.7	0		0		0		0		0		0		0		3	0.2
Women	0		0		0		1	0.5	1		0		0		0		0		0		0		1	0.1
FOREIGN	133	72.3	341	48.6	70	54.7	275	45.3	59	38.1	104	27.9	33	26.8	27	33.8	17	23.0	4	21.1	312	47.0	751	42.2
Men	73	73.7	227	54.2	40	53.3	188	46.9	27	34.6	55	25.6	16	25.4	16	33.3	6	15.0	3	25.0	162	24.4	489	27.5
Women	60	70.6	114	40.3	30	56.6	87	42.2	32	41.6	49	31.0	17	28.3	11	34.4	11	32.4	1	14.3	150	22.6	262	14.7
TOTALS	184	100	702	100	128	100	607	100	155	100	373	100	123	100	80	100	74	100	19	100	664	100	1781	100
Men	99	100	419	100	75	100	401	100	78	100	215	100	63	100	48	100	40	100	12	100	355	53	1095	61
Women	85	100	283	100	53	100	206	100	77	100	158	100	60	100	32	100	34	100	7	100	309	47	686	39

(1) Includes other American minorities.

FIELD: Podiatry

SOURCE: Minorities and Women in the Health Fields, 1974; and Women in Health Careers, Health Resources Administration, U.S. Dept. of HEW; and Personal Communication, American Association of Colleges of Podiatric Medicine, October 18, 1989

TABLE 8-35

TOTAL ENROLLMENTS IN COLLEGES OF PODIATRIC MEDICINE IN THE U.S. BY SEX, 1978-79 THRU 1988-89

YEAR	Total	Men	%M	Women	%W
1969-70	1,095	1,085	99.1	10	0.9
1970-71	1,148	1,132	98.6	16	1.4
1971-72	1,268	1,252	98.7	16	1.3
1972-73	1,401	1,380	98.5	21	1.5
1973-74	1,623	1,583	97.5	40	2.5
1974-75	1,835	1,777	96.8	58	3.2
1975-76	2,081	1,981	95.2	100	4.8
1976-77	2,204	2,047	92.9	157	7.1
1977-78	2,388	2,129	89.2	259	10.8
1978-79	2,498	2,230	89.3	268	10.7
1979-80	2,531	2,226	87.9	305	12.1
1980-81	2,577	2,271	88.1	306	11.9
1981-82	2,584	2,223	86.0	361	14.0
1982-83	2,608	2,180	83.6	428	16.4
1983-84	2,556	2,080	81.4	476	18.6
1984-85	2,616	2,047	78.2	569	21.8
1985-86	2,749	2,129	77.4	620	22.6
1986-87	2,832	2,160	76.3	672	23.7
1987-88	2,790	2,110	75.6	680	24.4
1988-89	2,608	1,937	74.3	671	25.7
TOTALS	43,992	37,959	86.3	6,033	13.7

TABLE 8-36

MINORITY ENROLLMENT IN COLLEGES OF PODIATRIC MEDICINE, 1978-79 THRU 1988-89

YEAR	Total Students	Black No.	Black %	Hispanic No.	Hispanic %	Am. Indian No.	Am. Indian %	Asian/Pac No.	Asian/Pac %	Total Min.* No.	Total Min.* %
1978-79	2,498	77	3.1	27	1.1	8	0.3	51	2.0	163	6.5
1979-80	2,531	93	3.7	28	1.1	5	0.2	63	2.5	189	7.5
1980-81	2,577	110	4.3	32	1.2	6	0.2	68	2.6	216	8.4
1981-82	2,584	125	4.8	40	1.5	5	0.2	68	2.6	238	9.2
1982-83	2,608	154	5.9	33	1.3	5	0.2	75	2.9	267	10.2
1983-84	2,556	170	6.7	41	1.6	9	0.4	68	2.7	288	11.3
1984-85	2,616	185	7.1	57	2.2	11	0.4	99	3.8	352	13.5
1985-86	2,749	208	7.6	71	2.6	14	0.5	110	4.0	403	14.7
1986-87	2,832	216	7.6	77	2.7	6	0.2	127	4.5	426	15.0
1987-88	2,790	236	8.5	89	3.2	8	0.3	151	5.4	489	17.5
1988-89	2,608	237	9.1	95	3.6	5	0.2	156	6.0	506	19.4
TOTALS	28,949	1,811	6.3	590	2.0	82	0.3	1,036	3.6	3537	12.2

* May include "other" minorities

SOURCE: Health Resources and Services Administration, Public Health Service, Department of Health and Human Services

TABLE 8-37

FIRST YEAR ENROLLMENT IN NURSE TRAINING PROGRAMS BY TYPE OF PROGRAM, 1974-75 - 1985-86

Academic Year	Total First-Year Enrollment	Minority Enrollment No.	Minority Enrollment %	Black No.	Black %	Hispanic No.	Hispanic %	Other No.	Other %
				All Registered Nurse Programs					
1974-75	89,706	11,322	12.6%	8,159	9.1%	2,080	2.3%	1,083	1.2%
1977-78	101,438	11,212	11.1%	7,313	7.2%	2,520	2.5%	1,379	1.4%
1980-81	102,540	13,799	13.5%	8,537	8.3%	3,515	3.4%	1,747	1.7%
1984-85	101,493	12,862	12.7%	8,096	8.0%	2,495	2.5%	2,271	2.2%
				RN Baccalaureate Degree Programs					
1974-75	29,479	4,911	16.7%	3,650	12.4%	807	2.7%	454	1.5%
1977-78	35,442	4,366	12.3%	2,905	8.2%	970	2.7%	491	1.4%
1980-81	32,548	5,390	16.6%	2,797	8.6%	1,813	5.6%	780	2.4%
1984-85	33,296	3,855	11.6%	2,444	7.3%	672	2.0%	739	2.2%
				RN Associate Degree Programs					
1974-75	38,581	5,096	13.2%	3,495	9.1%	1,069	2.8%	532	1.4%
1977-78	46,755	5,515	11.8%	3,580	7.7%	1,318	2.8%	617	1.3%
1980-81	53,127	6,993	13.2%	4,668	8.8%	1,477	2.8%	848	1.6%
1984-85	54,134	7,620	14.1%	4,738	8.8%	1,568	2.9%	1,314	2.4%
				RN Diploma Programs					
1974-75	21,646	1,315	6.1%	1,014	4.7%	204	0.9%	97	0.4%
1977-78	19,241	1,331	6.9%	828	4.3%	232	1.2%	271	1.4%
1980-81	16,865	1,416	8.4%	1,072	6.4%	225	1.3%	119	0.7%
1984-85	14,063	1,387	9.9%	914	6.5%	255	1.8%	218	1.6%
1985-86	9,436	1,085	11.5%	749	7.9%	178	1.9%	158	1.7%
				All Practical Nurse Programs					
1974-75	46,530	8,313	17.9%	5,795	12.5%	1,927	4.1%	591	1.3%
1977-78	53,002	8,279	15.6%	5,883	11.1%	1,655	3.1%	741	1.4%
1980-81	51,335	8,993	17.5%	6,252	12.2%	2,010	3.9%	731	1.4%
1984-85	35,546	7,874	22.2%	5,829	16.4%	1,327	3.7%	718	2.0%

FIELD: Nursing

SOURCE: Series of Earned Degrees Conferred, 1969-87, National Center for Education Statistics

TABLE 8-38

DEGREES IN NURSING BY SEX AND LEVEL OF DEGREE, 1968-69 - 1986-87

YEAR	BACHELORS			MASTERS			DOCTORATES		
	Both Sexes	Women Only	% Women	Both Sexes	Women Only	% Women	Both Sexes	Women Only	% Women
1969-70	11,280	11,120	98.6	1,549	1,531	98.8	11	10	90.9
1970-71	12,283	12,029	97.9	1,542	1,511	98.0	7	6	85.7
1971-72	13,245	12,902	97.4	1,846	1,815	98.3	10	10	100.0
1972-73	15,526	15,063	97.0	2,093	1,983	94.7	17	13	76.5
1973-74	19,409	18,653	96.1	2,293	2,229	97.2	14	14	100.0
1974-75	23,813	22,709	95.4	2,220	2,154	97.0	16	16	100.0
1975-76	26,846	25,484	94.9	3,058	2,968	97.1	16	16	100.0
1976-77	28,402	26,870	94.6	3,257	3,155	96.9	24	22	91.7
1977-78	30,307	28,661	94.6	3,812	3,671	96.3	56	53	94.6
1978-79	31,808	30,002	94.3	4,256	4,088	96.1	68	65	95.6
1979-80	32,852	31,054	94.5	4,637	4,464	96.3	118	116	98.3
1980-81	32,794	31,140	95.0	5,096	4,899	96.1	113	109	96.5
1981-82	33,177	31,482	94.9	5,312	5,034	94.8	134	128	95.5
1982-83	31,442	29,965	95.3	4,451	4,298	96.6	124	117	94.4
1983-84	33,092	31,263	94.5	5,744	5,296	92.2	220	204	92.7
1984-85	33,654	31,717	94.2	5,761	5,303	92.0	273	246	90.1
1985-86	34,097	32,139	94.3	6,050	5,571	92.1	277	257	92.8
1986-87	33,976	32,126	94.6	6,184	5,756	93.1	275	248	90.2
TOTALS	478,003	454,379	95.1	69,161	65,726	95.0	1,773	1,650	93.1

FIELD: Speech Pathology and Audiology

TABLE 8-39

DEGREES IN SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY BY SEX AND LEVEL OF DEGREE, 1968-69 - 1986-87

YEAR	BACHELORS			MASTERS			DOCTORS		
	Both Sexes	Women Only	% Women	Both Sexes	Women Only	% Women	Both Sexes	Women Only	% Women
1970-71	1,427	1,251	87.7	845	690	81.7	70	22	31.4
1971-72	1,863	1,609	86.4	1,033	881	85.3	58	29	50.0
1972-73	2,574	2,259	87.8	1,417	1175	82.9	69	23	33.3
1973-74	3,278	2,934	89.5	1,964	1671	85.1	78	28	35.9
1974-75	3,732	3,345	89.6	2,377	2011	84.6	71	30	42.3
1975-76	3,925	3,582	91.3	3,119	2724	87.3	109	46	42.2
1976-77	3,864	3,555	92.0	3,019	2704	89.6	96	49	51.0
1977-78	3,551	3,247	91.4	3,190	2921	91.6	121	58	47.9
1978-79	3,554	3,297	92.8	3,496	3180	91.0	113	60	53.1
1979-80	3,576	3,319	92.8	3,304	3056	92.5	110	56	50.9
1980-81	3,445	3,225	93.6	3,226	2982	92.4	112	59	52.7
1981-82	3,414	3,234	94.7	3,104	2895	93.3	114	67	58.8
1982-83	2,909	2,847	97.9	2,737	2547	93.1	92	61	66.3
1983-84*	430	410	95.3	171	161	94.2	0	0	0.0
1984-85	393	376	95.7	241	225	93.4	0	0	0.0
1985-86	409	388	94.9	254	246	96.9	0	0	0.0
1986-87	2563	2435	95.0	2985	2820	94.5	89	65	0.0
TOTAL	44,907	41,313	91.8	36,482	32,889	90.2	1,302	653	50.2

FIELD: Medical Lab Technologies

SOURCE: Series of Earned Degrees Conferred, 1969-87, National Center for Education Statistics

TABLE 8-40

DEGREES IN MEDICAL LAB TECHNOLOGIES BY SEX AND LEVEL OF DEGREE, 1968-69 - 1986-87

YEAR	BACHELORS Both Sexes	Women Only	% Women	MASTERS Both Sexes	Women Only	% Women
1968-69	2,846	2,551	89.6	28	23	82.1
1969-70	3,228	2,823	87.5	71	57	80.3
1970-71	3,145	2,755	87.6	72	55	76.4
1971-72	3,407	2,880	84.5	97	62	63.9
1972-73	3,806	3,102	81.5	95	77	81.1
1973-74	4,840	3,864	79.8	164	95	57.9
1974-75	5,087	4,005	78.7	174	91	52.3
1975-76	5,445	4,356	80.0	266	137	51.5
1976-77	5,286	4,242	80.2	333	184	55.3
1977-78	5,288	4,221	79.8	292	175	59.9
1978-79	5,235	4,143	79.1	303	179	59.1
1979-80	5,130	4,128	80.5	231	154	66.7
1980-81	4,896	4,012	81.9	233	150	64.4
1981-82	4,596	3,794	82.6	207	131	63.3
1982-83	3,249	2,631	81.0	144	69	47.9
1983-84	2,714	2,179	80.3	46	33	71.7
1984-85	2,720	2,222	81.7	28	18	64.3
1985-86	2,554	2,072	81.1	33	25	75.8
1986-87	2,226	1,747	78.5	28	22	78.6
TOTALS	75,698	61,727	81.5	2,845	1,737	61.1

FIELD: Physical Therapy

TABLE 8-41

DEGREES IN PHYSICAL THERAPY BY SEX AND LEVEL OF DEGREE, 1968-69 - 1986-87

YEAR	BACHELORS Both Sexes	Women Only	% Women	MASTERS Both Sexes	Women Only	% Women
1968-69	1,071	922	86.1	41	30	73.2
1969-70	1,091	922	84.5	49	32	65.3
1970-71	1,306	1,045	80.0	75	56	74.7
1971-72	1,483	1,182	79.7	55	30	54.5
1972-73	1,756	1,381	78.6	78	51	65.4
1973-74	1,900	1,497	78.8	111	77	69.4
1974-75	2,121	1,615	76.1	133	85	63.9
1975-76	2,091	1,620	77.5	167	113	67.7
1976-77	2,333	1,790	76.7	162	101	62.3
1977-78	2,418	1,903	78.7	258	184	71.3
1978-79	2,651	2,079	78.4	242	154	63.6
1979-80	2,372	1,845	77.8	282	203	72.0
1980-81	2,745	2,213	80.6	250	186	74.4
1981-82	2,736	2,200	80.4	317	233	73.5
1982-83	2,581	2,074	80.4	303	198	65.3
1983-84	2,947	2,395	81.3	399	289	72.4
1984-85	3,129	2,503	80.0	400	286	71.5
1985-86	3,039	2,412	79.4	405	292	72.1
1986-87	2,226	1,747	78.5	522	395	75.7
TOTALS	41,996	33,345	79.4	4,249	2,995	70.5

SOURCE:

FIELD: Public Health

SOURCE: Data compiled by the Association of Schools of Public Health, Washington, D.C., obtained by personal communication

TABLE 8-42

TOTAL ENROLLMENT IN SCHOOLS OF PUBLIC HEALTH BY SEX AND MINORITY, ACADEMIC YEARS 1974-75 THROUGH 1987-88 (U.S. Citizens Only)

Academic Year	Total Students Identified by Sex[1]	Women Students	Percent Women of Total Students Identified by Sex	Total Students Identified by Race[2]	Racial/Ethnic Category				Total Minority	Percent Minority of Total Students Identified by Race
					Black	Hispanic	Asian	Indian		
1974-75	4,980	2,307	46.3	4,515	351	76**	156	49	632	14.1
1975-76	5,411	2,646	48.9	5,268	348	309	218	59	934	17.7
1976-77	5,569	2,786	50.0	*	*	*	*	*	*	*
1977-78	5,781	2,999	51.9	*	*	*	*	*	*	*
1978-79	6,315	3,472	55.0	*	*	*	*	*	*	*
1979-80	6,523	3,677	56.4	6,485	415	173**	408	68	1,064	16.4
1980-81	5,994	3,472	57.9	5,994	379	242	393	88	1,102	18.4
1981-82	7,366	4,350	59.1	6,504	376	271	335	82	1,064	16.4
1982-83	7,614	4,624	60.7	7,005	403	359	368	70	1,200	17.1
1983-84	8,937	5,152	58.3	6,895	357	388	313	59	1,117	16.2
1984-85	8,956	3,627	59.5	7,641	368	392	302	54	1,116	14.6
1985-86	7,942	5,099	63.7	7,254	443	452	304	63	1,262	17.4
1987-88	10,220	6,125	59.9	9,538	703	569	457	88	1,817	19.1

[1] Students not identified by sex in the years listed are: 1974-75, 92; 1975-76, 4; 1976-77, 28; 1977-78, 23; 1978-79, 29; 1979-80, 9; 1980-81, 53; 1981-82, 0; 1982-83, 1; 1985-86, 0; 1987-88, 0.

[2] Counts of students not identified by race in the years listed are: 1974-75, 557; 1975-76, 147; 1979-80, 47; 1980-81, 53; 1981-82, 862; 1982-83, 610; 1985-86, 698; 1987-88, 682.

* Not Available

**Puerto Rican not included.

SOURCE: Earned Degrees Conferred, 1971-1987, National Center for Education Statistics

TABLE 8-43

DEGREES IN HEALTH SERVICES ADMINISTRATION BY SEX AND LEVEL, 1968-69 - 1986-87

YEAR	BACHELORS			MASTERS			DOCTORATES		
	Both Sexes	Women Only	% Women	Both Sexes	Women Only	% Women	Both Sexes	Women Only	% Women
1968-69	37	3	8.1	403	59	14.6	2	1	50.0
1969-70	32	6	18.8	479	64	13.4	7	0	0.0
1970-71	60	4	6.7	518	64	12.4	14	0	0.0
1971-72	126	55	43.7	677	102	15.1	12	0	0.0
1972-73	121	16	13.2	743	82	11.0	12	2	16.7
1973-74	185	32	17.3	990	206	20.8	21	4	19.0
1974-75	306	99	32.4	997	196	19.7	13	0	0.0
1975-76	421	150	35.6	1,139	278	24.4	11	0	0.0
1976-77	668	320	47.9	1,354	355	26.2	18	3	16.7
1977-78	1,158	716	61.8	1,565	567	36.2	12	2	16.7
1978-79	1,338	864	64.6	1,748	671	38.4	16	4	25.0
1979-80	1,692	1,154	68.2	1,698	718	42.3	13	4	30.8
1980-81	1,581	1,043	66.0	1,996	933	46.7	12	2	16.7
1981-82	1,978	1,397	70.6	1,640	805	49.1	20	5	25.0
1982-83	2,267	1,701	75.0	1,729	903	52.2	14	4	28.6
1983-84	3,014	2,442	81.0	2,176	1,215	55.8	27	12	44.4
1984-85	3,171	2,494	78.7	2,384	1,378	57.8	24	13	54.2
1985-86	3,154	2,544	80.7	2,549	1,562	61.3	26	8	30.8
1986-87	3,210	2,524	78.6	2,592	1,637	63.2	23	9	39.1
TOTALS	24,519	17,564	71.6	27,377	11,795	43.1	297	73	24.6

SOURCE: Office of Personnel Management, unpublished tabulations

TABLE 8-44

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN MEDICAL AND HEALTH SCIENCES BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, SEPT 30, 1988

	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		ASIAN		AM. INDIAN		WHITE	
OCCUPATIONAL TITLE	TOTAL	WOMEN	% W	TOTAL	%	WOMEN	% W	No.	% B	No.	% H	No.	% A	No.	% I	No.	% W
General Health Science	2615	1154	44.1	377	14.4	168	44.6	195	7.5	67	2.6	97	3.7	18	0.7	2238	85.6
Medical Officer	33427	7020	21.0	6549	19.6	1759	26.9	1055	3.2	1634	4.9	3753	11.2	107	0.3	26878	80.4
Nurse Anesthetist	537	298	55.5	68	12.7	48	70.6	35	6.5	18	3.4	13	2.4	2	0.4	469	87.3
Nurse	43344	39471	91.1	11502	26.5	10760	93.5	5694	13.1	1968	4.5	3034	7.0	806	1.9	31842	73.5
Dietitian & Nutritionist	1705	1626	95.4	366	21.5	350	95.6	193	11.3	73	4.3	80	4.7	20	1.2	1339	78.5
Occupational Therapist	706	637	90.2	125	17.7	110	88.0	52	7.4	38	5.4	34	4.8	1	0.1	581	82.3
Physical Therapist	643	464	72.2	114	17.7	81	71.1	45	7.0	55	8.6	13	2.0	1	0.2	529	82.3
Corrcetive Therapist	541	162	29.9	171	31.6	64	37.4	148	27.4	12	2.2	10	1.8	1	0.2	370	68.4
Manual Arts Therapist	229	22	9.6	28	12.2	2	7.1	21	9.2	2	0.9	4	1.7	1	0.4	201	87.8
Recreational/Creative Arts Therapist	740	368	49.7	120	16.2	54	45.0	91	12.3	21	2.8	5	0.7	3	0.4	620	83.8
Educational Therapist	64	40	62.5	11	17.2	8	72.7	11	17.2	0	0.0	0	0.0	0	0.0	53	82.8
Medical Technologist	5573	3882	69.7	1403	25.2	941	67.1	593	10.6	279	5.0	439	7.9	92	1.7	4170	74.8
Pharmacist	4064	1465	36.0	887	21.8	493	55.6	265	6.5	188	4.6	413	10.2	21	0.5	3177	78.2
Optometrist	245	51	20.8	23	9.4	8	34.8	3	1.2	1	0.4	16	6.5	3	1.2	222	90.6
Speach Pathology & Audiology	922	597	64.8	69	7.5	53	76.8	31	3.4	13	1.4	16	1.7	9	1.0	853	92.5
Podiatrist	256	27	10.5	26	10.2	5	19.2	15	5.9	1	0.4	8	3.1	2	0.8	230	89.8
Dental Officer	1492	157	10.5	141	9.5	32	22.7	48	3.2	49	3.3	43	2.9	1	0.1	1351	90.5
Induatrial Hygienist	1270	386	30.4	199	15.7	78	39.2	97	7.6	45	3.5	55	4.3	2	0.2	1071	84.3
Consumer Safety	1463	351	24.0	253	17.3	89	35.2	143	9.8	69	4.7	36	2.5	5	0.3	1210	82.7
Veterinary Medical Science	2136	250	11.7	428	20.0	61	14.3	121	5.7	68	3.2	229	10.7	10	0.5	1708	80.0
TOTALS	101972	58428	57.3	22860	22.4	15164	66.3	8856	8.7	4601	4.5	8298	8.1	1105	1.1	79112	77.6

SOURCE: Science and Engineering Doctorates: 1960-85, National Science Foundation, 1987; and Doctorate Recipients from United States Universities, Summary Reports, 1972-88, National Research Council

TABLE 9-1

PHD AWARDS IN THE BEHAVIORAL AND SOCIAL SCIENCES BY SUBFIELD AND SEX, 1960-88

	Year of Doctorate														
	1960-69			1970-79			1980-86			1987			1988		
Subfields	Total	Women	%Wom	Total	Women	%Wom	Total	Women	%Wom	Total	Women	%Wom	Total	Women	%Wom
TOTAL BEHAV & SOCIAL SCI	25981	3816	14.7	59426	14784	24.9	48629	19110	39.3	5718	2449	42.8	5769	2596	45.0
PSYCHOLOGY	10969	2269	20.7	26139	8394	32.1	25376	12016	47.4	3098	1652	53.3	3058	1675	54.8
Clinical	3674	841	22.9	8126	2652	32.6	9380	4459	47.5	1154	628	54.4	1089	612	56.2
Cognitive(1)							364	147	40.4	80	41	51.3	83	34	41.0
Comparative(2)	115	17	14.8	218	58	26.6	91	34	37.4	9	6	66.7	7	4	57.1
Counseling(3)	679	131	19.3	2171	710	32.7	3199	1545	48.3	485	252	52.0	482	261	54.1
Developmental(4)	359	165	46.0	1647	880	53.4	1561	1013	64.9	200	139	69.5	175	130	74.3
Experimental(2)	1916	287	15.0	3439	834	24.3	1685	633	37.6	146	54	37.0	134	61	45.5
Exper, Compar, Physiol(2)	457	59	12.9				0	0							
Educational	550	156	28.4	1250	442	35.4	1182	612	51.8	89	50	56.2	103	65	63.1
Indust, Organizational(5)	436	18	4.1	732	93	12.7	739	238	32.2	104	49	47.1	117	53	45.3
Personality	285	60	21.1	528	190	36.0	243	109	44.9	24	11	45.8	18	8	44.4
Physiological(2)	517	75	14.5	1224	311	25.4	698	228	32.7	69	32	46.4	85	45	52.9
Psychometrics	188	26	13.8	230	39	17.0	103	45	43.7	9	3	33.3	11	6	54.5
Quantitative(1)							86	25	29.1	13	7	53.8	12	5	41.7
School	185	47	25.4	1046	437	41.8	985	531	53.9	93	53	57.0	115	66	57.4
Social	1029	231	22.4	1992	598	30.0	1370	689	50.3	133	72	54.1	140	75	53.6
Psychology, General	395	118	29.9	2017	662	32.8	2093	984	47.0	336	172	51.2	360	191	53.1
Psychology, Other	184	38	20.7	1519	488	32.1	1597	724	45.3	154	83	53.9	127	59	46.5
							0	0							
SOCIAL SCIENCES	15012	1547	10.3	33287	6390	19.2	23253	7094	30.5	2620	797	30.4	2711	921	34.0
Anthropology	1015	218	21.5	3402	1180	34.7	2867	1369	47.8	352	181	51.4	325	169	52.0
Archeology	100	34	34.0	220	95	43.2	184	97							
Area Studies	101	16	15.8	377	72	19.1	170	46	27.1	17	5	29.4	17	5	29.4
Criminology(9)							271	76	28.0	29	7	24.1	43	15	34.9
Demography(1)							108	44	40.7	26	7	26.9	19	11	57.9
Economics	5286	245	4.6	8318	735	8.8	6255	957	15.3	798	136	17.0	825	163	19.8
Econometrics	207	9	4.3	268	12	4.5	190	19	10.0	25	4	16.0	27	4	14.8
Geography	695	38	5.5	1666	168	10.1	941	211	22.4	111	25	22.5	130	33	25.4
International Relations	712	74	10.4	1121	135	12.0	656	106	16.2	84	15	17.9	77	14	18.2
Pol Sci & Government(7)							2044	513	25.1	405	111	27.4	391	95	24.3
Political Science(7)				2369	422	17.8	1409	304							
Pol Sci, Public Admin(7)	3123	259	8.3	4351	560	12.9	0	0							
Public Policy Studies(1)							342	128	37.4	80	30	37.5	74	25	33.8
Sociology	2538	445	17.5	6356	1812	28.5	4228	1813	42.9	423	168	39.7	449	238	53.0
Statistics	134	9	6.7	623	59	9.5	387	82	21.2	49	13	26.5	47	9	19.1
Urban Studies(8)				623	93	14.9	623	163	26.2	72	22	30.6	87	32	36.8
History of science(6)				282	67	23.8	159	47							
Linguistics	738	168	22.8	1715	615	35.9	1225	593							
Social Sciences, General	65	7	10.8	300	84	28.0	194	69	35.6	30	6	20.0	29	14	48.3
Social Sciences, Other	298	25	8.4	1296	281	21.7	1000	457	45.7	119	67	56.3	171	94	55.0

(1) Introduced in 1983. (2) "Experimental, comparative, and physiological psychology" split into separate subfields in 1962. (3) Changed from "Counseling and guidance" to "Couseling" in 1983. (4) Changed from "Developmental and gerontological" to "Developmental" in 1983. (5) Changed from "Industrial and personnel" to "Industrial and organizational" in 1983. (6) "History and philosophy of science" before 1983; introduced in 1971. (7) "Political science, public administration: split into separate subfields in 1976 with "Public administration" then not included in science or engineering fields. In 1983, "Political science and government" replaced "Political science." (8) Introduced in 1970 as "Urban and regional planning." (9) Introduced in 1980.

FIELD: Social Sciences

SOURCE: Doctorate Recipients from United States Universities, Summary Reports, 1973-88, National Research Council

TABLE 9-2

PhD DEGREES IN SELECTED SOCIAL SCIENCES BY CITIZENSHIP & RACE/ETHNICITY 1973-88

Field & Year	Total*	Non-Cit Temp Visas	% T	Citizens and Permanent Visa Non-Citizens											
				Total	Amer. Ind.	%US	Asian	%US	Black	%US	White	%US	His-panic	%US	Other/ Unkn.
ANTHROPOLOGY															
1973-76	1,518	137	9.0	1,381	9	0.7	17	1.2	26	1.9	1,149	83.2	15	1.1	165
1977-80	1,537	101	6.6	1,397	13	0.9	27	1.9	24	1.7	1,204	86.2	23	1.6	106
1981-84	1410	107	7.6	1,248	5	0.4	15	1.2	31	2.5	1114	89.3	28	2.2	55
1985	353	23	6.5	316	3	0.9	12	3.8	10	3.2	260	82.3	15	4.7	16
1986	381	29	7.6	329	2	0.6	5	1.5	4	1.2	295	89.7	14	4.3	9
1987	352	21	6.0	304	1	0.3	12	3.9	9	3.0	255	83.9	13	4.3	14
1988	325	28	8.6	276	2	0.7	7	2.5	6	2.2	240	87.0	13	4.7	8
1973-88	5,876	446	7.6	5,251	35	0.7	95	1.8	110	2.1	4,517	86.0	121	2.3	373
SOCIOLOGY															
1973-76	2,658	255	9.6	2,403	8	0.3	46	1.9	97	4.0	1,924	80.1	22	0.9	306
1977-80	2,569	245	9.5	2,278	20	0.9	66	2.9	116	5.1	1,910	83.8	57	2.5	109
1981-84	2211	249	11.3	1,884	3	0.2	58	3.1	108	5.7	1608	85.4	61	3.2	46
1985	461	60	13.0	380		0.0	8	2.1	26	6.8	323	85.0	17	4.5	6
1986	492	68	13.8	396	4	1.0	11	2.8	25	6.3	330	83.3	14	3.5	12
1987	423	54	12.8	334	2	0.6	18	5.4	12	3.6	284	85.0	10	3.0	8
1988	449	68	15.1	342	2	0.6	13	3.8	22	6.4	282	82.5	16	4.7	7
1973-88	9,263	999	10.8	8,017	39	0.5	220	2.7	406	5.1	6,661	83.1	197	2.5	494
ECONOMICS															
1973-76	3,461	816	23.6	2,645	8	0.3	90	3.4	30	1.1	2,214	83.7	16	0.6	287
1977-80	3,112	761	24.5	2,263	7	0.3	119	5.3	47	2.1	1,911	84.4	33	1.5	146
1981-84	3102	838	27.0	2,111	3	0.1	136	6.4	69	3.3	1781	84.4	44	2.1	78
1985	785	269	34.3	481	2	0.4	26	5.4	14	2.9	405	84.2	14	2.9	20
1986	836	260	31.1	519	2	0.4	28	5.4	15	2.9	450	86.7	6	1.2	18
1987	798	249	31.2	482	0	0.0	42	8.7	14	2.9	402	83.4	13	2.7	11
1988	827	290	35.1	473	0	0.0	47	9.9	15	3.2	390	82.5	12	2.5	9
1973-88	11,296	2,944	26.1	8,974	22	0.2	399	4.4	175	2.0	6,761	75.3	113	1.3	549
POLITICAL SCIENCE															
1973-76	628	88	14.0	540	3	0.6	9	1.7	14	2.6	477	88.3	8	1.5	29
1977-80	2,243	227	10.1	1,943	6	0.3	48	2.5	100	5.1	1,639	84.4	37	1.9	113
1981-84	1720	252	14.7	1,395	2	0.1	46	3.3	87	6.2	1148	82.3	39	2.8	73
1985	407	79	19.4	292	1	0.3	10	3.4	22	7.5	236	80.8	6	2.1	17
1986	414	72	17.4	295		0.0	11	3.7	17	5.8	246	83.4	11	3.7	10
1987	405	77	19.0	287	0	0.0	9	3.1	18	6.3	243	84.7	10	3.5	7
1988	391	82	21.0	253	0	0.0	6	2.4	16	6.3	215	85.0	6	2.4	10
1973-88	5,412	718	13.3	5,005	12	0.2	124	2.5	240	4.8	3,746	74.8	101	2.0	242

* Includes individuals who did not report their citizenship at time of doctorate.

SOURCE: Series of Earned Degrees Conferred, 1950-87, National Center for Education Statistics

TABLE 9-3

PHD DEGREES IN THE BEHAVIORAL AND SOCIAL SCIENCES BY SEX AND SUBFIELD, 1950-1987

				Behavioral and Social Sciences Fields																			
				Psychology				Economics				Political Science				Sociology				Other			
Year	Total	Wom	%W	No.	%T	Wom	%W	No.	%T	Wom	%W	No.	%T	Wom	%W	No.	%T	Wom	%W	No.	%T	Wom	%W
1950	782	90	12	283	36	42	15	200	26	9	5	127	16	10	8	98	13	18	18	74	9	11	15
1951	1041	115	11	425	41	57	13	236	23	17	7	152	15	9	6	129	12	18	14	99	10	14	14
1952	1141	129	11	540	47	73	14	239	21	16	7	147	13	12	8	141	12	20	14	74	6	8	11
1953	1198	122	10	583	49	79	14	222	19	8	4	164	14	12	7	157	13	12	8	72	6	11	15
1954	1298	124	10	619	48	66	11	245	19	12	5	153	12	10	7	184	14	28	15	97	7	8	8
1955	1369	132	10	608	50	84	12	241	18	9	4	181	13	10	6	167	12	20	12	92	7	9	10
1956	1411	148	10	634	45	86	14	232	16	11	5	203	14	15	7	170	12	29	17	172	12	7	4
1957	1265	138	11	550	43	90	16	236	19	9	4	156	12	7	4	134	11	16	12	189	15	16	8
1958	1339	149	11	572	43	84	15	239	18	5	2	170	13	6	4	150	11	28	19	208	16	26	13
1959	1400	171	12	635	45	98	15	221	16	10	5	191	14	15	8	157	11	16	10	196	14	32	16
50-59	12,244	1,318	11	5,529	45	759	14	2,311	19	106	5	1,644	13	106	6	1,487	12	205	14	1,273	10	142	11
1960	1482	173	12	641	43	97	15	237	16	14	6	201	14	17	8	161	11	26	16	242	16	19	8
1961	1607	212	13	703	44	136	19	266	17	13	5	217	14	13	6	184	11	32	17	237	15	18	8
1962	1720	225	13	781	45	149	19	268	16	15	6	214	12	12	6	173	10	26	15	284	17	23	8
1963	1899	247	13	844	44	144	17	331	17	20	6	228	12	13	6	208	11	31	15	288	15	39	14
1964	2100	280	13	939	45	182	19	385	18	17	4	263	13	21	8	198	9	29	15	315	15	31	10
1965	2137	266	12	847	40	159	19	410	19	17	4	304	14	26	9	230	11	36	16	346	16	28	8
1966	2452	364	15	1046	43	220	21	458	19	22	5	336	14	29	9	244	10	36	15	368	15	57	15
1967	2913	426	15	1231	42	232	19	546	19	37	7	390	13	38	10	327	11	59	18	419	14	60	14
1968	3175	500	16	1268	40	286	23	600	19	35	6	457	14	52	11	367	12	68	19	483	15	59	12
1969	3663	603	16	1551	42	356	23	634	17	43	7	467	13	49	10	430	12	86	20	581	16	69	12
60-69	23,148	3,296	14	9,851	43	1,961	20	4,135	18	233	6	3,077	13	270	9	2,522	11	429	17	3,563	15	403	11
1970	4171	670	16	1668	40	372	22	794	19	52	7	525	13	56	11	534	13	104	19	650	16	86	13
1971	4560	811	18	1782	39	427	24	721	16	53	7	700	15	85	12	574	13	119	21	783	17	127	16
1972	4832	864	18	1881	39	467	25	794	16	60	8	758	16	80	11	636	13	136	21	763	16	121	16
1973	5234	1099	21	2089	40	605	29	845	16	52	6	747	14	95	13	583	11	154	26	970	19	193	20
1974	5449	1263	23	2339	43	691	30	788	14	75	10	766	14	111	14	632	12	177	28	924	17	209	23
1975	5565	1362	24	2442	44	754	31	815	15	73	9	680	12	111	16	693	12	209	30	935	17	215	23
1976	5717	1509	26	2581	45	819	32	763	13	81	11	723	13	121	17	729	13	218	30	921	16	270	29
1977	5756	1645	29	2761	48	991	36	758	13	86	11	641	11	100	16	714	12	234	33	882	15	234	27
1978	5437	1659	31	2597	48	971	37	706	13	80	11	636	12	119	19	599	11	223	37	899	17	266	30
1979	5373	1751	33	2674	50	1071	40	712	13	93	13	563	10	99	18	612	11	221	36	812	15	267	33
70-79	52,094	12,633	24	22,814	44	7,168	31	7,696	15	705	9	6,739	13	977	14	6,306	12	1,795	28	8,539	16	1,988	23
1980	5410	1884	35	2775	51	1171	42	677	13	102	15	535	10	107	20	583	11	228	39	840	16	276	33
1981	5594	1967	35	2955	53	1274	43	727	13	100	14	484	9	96	20	610	11	239	39	818	15	258	32
1982	5330	1953	37	2780	52	1262	45	699	13	96	14	513	10	112	22	558	10	207	37	780	15	276	35
1983	5615	2237	40	3108	55	1487	48	734	13	123	17	435	8	101	23	522	9	221	42	816	15	305	37
1984	5446	2215	41	2973	55	1456	49	729	13	109	15	457	8	105	23	520	10	231	44	767	14	314	41
1985	5378	2208	41	2908	54	1416	49	749	14	122	16	441	8	115	26	480	9	248	52	800	15	307	38
1986	5684	2440	43	3088	54	1591	52	789	14	157	20	439	8	115	26	504	9	227	45	864	15	350	41
1987	5567	2430	44	3123	56	1665	53	750	13	126	17	435	8	119	27	451	8	180	40	808	15	340	42
80-87	44,024	17,334	39	23,710	54	11,322	48	5,854	13	935	16	3,739	8	870	23	4,228	10	1,781	42	6,493	15	2,426	37
TOTAL	131,510	34,581	26	61,904	47	21,210	34	19,996	15	1,979	10	15,199	12	2,223	15	14,543	11	4,210	29	19,868	15	4,959	25

SOURCE: Series of Earned Degrees Conferred, 1950-87, National Center for Education Statistics

TABLE 9-3 (continued)

MASTERS DEGREES IN THE BEHAVIORAL AND SOCIAL SCIENCES BY SEX AND SUBFIELD, 1950-1987

				Social Sciences Fields															
				Economics				Political Sci				Sociology				Other			
Year	Total Soc Sci	Women	%W	No.	%T	Women	%W	No.	%T	Women	%W	No.	%T	Women	%W	No.	%T	Women	%W
1950	2468	484	20	921	37	114	12	710	29	113	16	552	22	179	32	285	12	78	27
1951	2343	375	16	809	35	71	9	657	28	90	14	584	25	162	28	293	13	52	18
1952	2007	339	17	695	35	83	12	525	26	76	14	517	26	131	25	270	13	49	18
1953	1865	326	17	582	31	61	10	509	27	76	15	504	27	139	28	270	14	50	19
1954	1854	306	17	609	33	62	10	534	29	79	15	440	24	117	27	271	15	48	18
1955	1817	345	19	617	34	78	13	498	27	84	17	474	26	126	27	228	13	57	25
1956	1944	331	17	581	30	56	10	509	26	75	15	402	21	127	32	452	23	73	16
1957	2189	413	19	606	28	50	8	535	24	68	13	515	24	223	43	533	24	72	14
1958	2370	391	16	669	28	70	10	665	28	80	12	397	17	139	35	639	27	102	16
1959	2460	413	17	664	27	60	9	649	26	110	17	461	19	140	30	686	28	103	15
50-59	21,317	3,723	17	6,753	32	705	10	5,791	27	851	15	4,846	23	1,483	31	3,927	18	684	17
1960	2544	386	15	708	28	58	8	722	28	129	18	440	17	113	26	674	26	86	13
1961	2767	412	15	820	30	67	8	764	28	112	15	504	18	142	28	679	25	91	13
1962	3124	538	17	853	27	89	10	839	27	176	21	578	19	156	27	854	27	117	14
1963	3641	609	17	1029	28	82	8	1051	29	184	18	684	19	197	29	877	24	146	17
1964	3858	662	17	1111	29	98	9	1163	30	223	19	646	17	180	28	938	24	161	17
1965	4348	819	19	1268	29	150	12	1210	28	230	19	789	18	246	31	1081	25	193	18
1966	5207	1030	20	1528	29	169	11	1429	27	277	19	981	19	301	31	1269	24	283	22
1967	6167	1197	19	1778	29	168	9	1775	29	387	22	1193	19	356	30	1421	23	286	20
1968	6851	1394	20	1921	28	197	10	1937	28	378	20	1193	17	403	34	1800	26	416	23
1969	7714	1624	21	2113	27	242	11	2108	27	405	19	1656	21	531	32	1837	24	446	24
60-69	46,221	8,671	19	13,129	28	1,320	10	12,998	28	2,501	19	8,664	19	2,625	30	11,430	25	2,225	19
1970	7956	1967	25	1990	25	247	12	2105	26	442	21	1816	23	677	37	2045	26	601	29
1971	8344	2089	25	1997	24	262	13	2318	28	479	21	1809	22	677	37	2220	27	671	30
1972	9065	2251	25	2225	25	284	13	2451	27	502	20	1945	21	754	39	2444	27	711	29
1973	9094	2291	25	2231	25	283	13	2399	26	480	20	1923	21	777	40	2541	28	751	30
1974	9358	2463	26	2145	23	303	14	2448	26	456	19	2196	23	869	40	2569	27	835	33
1975	9229	2539	28	2133	23	325	15	2333	25	476	20	2112	23	808	38	2651	29	930	35
1976	8944	2678	30	2093	23	334	16	2192	25	473	22	2010	22	844	42	2649	30	1027	39
1977	8974	2753	31	2166	24	383	18	2223	25	504	23	1830	20	812	44	2755	31	1054	38
1978	8320	2667	32	1997	24	396	20	2070	25	547	26	1611	19	733	45	2642	32	991	38
1979	7948	2623	33	1960	25	392	20	2038	26	558	27	1415	18	670	47	2535	32	1003	40
70-79	87,232	24,321	28	20,937	24	3,209	15	22,577	26	4,917	22	18,667	21	7,621	41	25,051	29	8,574	34
1980	7658	2628	34	1823	24	382	21	1938	25	515	27	1341	18	674	50	2556	33	1057	41
1981	7575	2721	36	1911	25	444	23	1875	25	533	28	1240	16	650	52	2549	34	1094	43
1982	7540	2729	36	1964	26	483	25	1954	26	610	31	1145	15	626	55	2477	33	1010	41
1983	7533	2785	37	1972	26	469	24	1829	24	543	30	1112	15	627	56	2620	35	1146	44
1984	7300	2740	38	1891	26	445	24	1769	24	537	30	1008	14	552	55	2632	36	1206	46
1985	7034	2660	38	1992	28	484	24	1500	21	438	29	1022	15	566	55	2520	36	1172	47
1986	7115	2768	39	1937	27	503	26	1704	24	550	32	965	14	536	56	2509	35	1179	47
1987	6735	2610	39	1855	28	474	26	1618	24	507	31	950	14	536	56	2312	34	1093	47
80-87	58,490	21,641	37	15,345	26	3,684	24	14,187	24	4,233	30	8,783	15	4,767	54	20,175	34	8,957	44
TOTAL	213,260	58,356	27	51,627	24	10,577	20	50,951	24	13,303	26	36,233	17	17,155	47	65,401	31	26,488	41

SOURCE: Series of Earned Degrees Conferred, 1950-87, National Center for Education Statistics

TABLE 9-3 (continued)

BACHELOR'S DEGREES IN THE BEHAVIORAL AND SOCIAL SCIENCES BY SEX AND SUBFIELD, 1950-1987

				Social Sciences Fields														
				Psychology			Economics			Political Sci			Sociology			Other		
Year	Total Soc Sci	Women	%W	No.	Women	%W	No.	Women	%W	No.	Women	%W	No.	Women	%W	No.	Women	%W
1950	39469	9929	25	9582	3524	37	14573	1102	8	6346	980	15	7887	4039	51	1081	284	26
1951	32164	8933	28	7819	2983	38	10484	905	9	5582	884	16	7320	3925	54	959	236	25
1952	27765	8780	32	6622	2839	43	8595	1075	13	4925	909	18	6697	3711	55	926	246	27
1953	25308	8005	32	5946	2616	44	7313	768	11	5086	974	19	6102	3447	56	861	200	23
1954	24493	8059	33	5758	2673	46	6728	790	12	5332	1018	19	5702	3315	58	973	263	27
1955	23835	7774	33	5532	2523	46	6364	686	11	5500	1085	20	5533	3200	58	906	280	31
1956	25186	7992	32	5665	2557	45	6584	676	10	5670	1109	20	5916	3363	57	1351	287	21
1957	26915	8301	31	6191	2666	43	6878	664	10	5874	1109	19	6383	3531	55	1589	331	21
1958	29050	8502	29	6930	2867	41	7514	605	8	6167	1136	18	6583	3606	55	1856	288	16
1959	30328	8798	29	7383	2906	39	7723	644	8	6387	1164	18	6877	3750	55	1958	334	17
50-59	284,513	85,073	30	67,428	28,154	42	82,756	7,915	10	56,869	10,368	18	65,000	35,887	55	12,460	2,749	22
1960	31494	9585	30	8111	3326	41	7488	672	9	6637	1256	19	7182	4011	56	2056	320	16
1961	33267	9987	30	8524	3431	40	7939	626	8	7149	1445	20	7519	4108	55	2136	377	18
1962	37030	11489	31	9638	3821	40	8405	760	9	8390	1909	23	8183	4554	56	2414	445	18
1963	42308	13599	32	11062	4557	41	9399	914	10	10138	2303	23	9055	5270	58	2654	555	21
1964	50320	16656	33	13359	5516	41	10607	1068	10	12206	2738	22	11053	6587	60	3095	747	24
1965	55715	18812	34	14721	6033	41	10895	1039	10	13693	3038	22	12896	7773	60	3510	929	26
1966	63424	21837	34	17022	6981	41	11585	1138	10	15375	3381	22	15203	9064	60	4239	1273	30
1967	72929	25134	34	19496	7806	40	13058	1331	10	17733	3920	22	17751	10588	60	4891	1489	30
1968	87774	31646	36	23972	10144	42	15296	1630	11	20522	4466	22	22062	13485	61	5922	1921	32
1969	104399	38275	37	29495	12719	43	16907	1799	11	23920	4969	21	26555	16213	61	7522	2575	34
60-60	578,660	197,020	34	155,400	64,334	41	111,579	10,977	10	135,783	29,425	22	137,459	81,653	59	38,439	10,631	28
1970	116561	43180	37	33854	14741	44	17258	1877	11	25856	5158	20	30848	18403	60	8745	3001	34
1971	125473	47996	38	38154	17037	45	15958	1912	12	27636	5564	20	33662	19959	59	10063	3524	35
1972	133604	51544	39	43421	20154	46	15336	1817	12	28317	5338	19	35626	20294	57	10904	3941	36
1973	140579	55583	40	48096	22986	48	14867	2059	14	30246	5919	20	35994	20249	56	11376	4370	38
1974	145449	59996	41	52256	26407	51	14418	2121	15	30932	6199	20	35896	20582	57	11947	4687	39
1975	137864	59177	43	51436	27103	53	14118	2439	17	29314	6610	23	31817	18487	58	11179	4538	41
1976	132451	58548	44	50363	27376	54	14854	2914	20	28515	7205	25	27970	16591	59	10749	4462	42
1977	125143	57719	46	47794	27102	57	15342	3527	23	26576	7497	28	24989	15187	61	10442	4406	42
1978	120518	57512	48	45057	26540	59	15746	3933	25	26245	8168	31	22991	14568	63	10479	4303	41
1979	115787	57117	49	43012	26363	61	16534	4555	28	25817	8620	33	20545	13390	65	9879	4189	42
70-79	1,293,429	548,372	42	453,443	235,809	52	154,431	27,154	18	279,454	66,278	24	300,338	177,710	59	105,763	41,421	39
1980	114779	58466	51	42513	26923	63	17954	5430	30	25658	9212	36	19164	12781	67	9490	4120	43
1981	110934	57430	52	40833	26538	65	18753	5717	30	24977	9181	37	17272	12025	70	9099	3969	44
1982	111645	58719	53	41061	27408	67	19876	6452	32	25658	9775	38	16042	11271	70	9008	3813	42
1983	109302	57772	53	40264	27259	68	20518	6825	33	25791	10133	39	14105	9832	70	8524	3723	44
1984	108007	56666	52	39872	27080	68	20719	7074	34	25719	10064	39	13125	8927	68	8572	3521	41
1985	106928	56274	53	39811	27117	68	20711	7149	35	25834	10194	39	11968	8267	69	8604	3547	41
1986	109153	57729	53	40521	27943	69	21602	7439	34	26439	10470	40	12271	8460	69	8320	3417	41
1987	112634	59876	53	42868	29536	69	22387	7607	34	26834	10835	40	12231	8389	69	8314	3509	42
80-87	770,748	403,056	52	284,975	190,268	67	140,133	46,006	33	180,076	69,029	38	103,947	71,563	69	61,617	26,110	42
TOTAL	2,927,350	1,233,521	42	961,246	518,565	54	488,899	92,132	19	652,182	175,100	27	606,744	366,813	60	218,279	80,911	37

SOURCE: Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, National Science Foundation; and 1980-88 Summary Report, Doctorate Recipients from United States Universities, National Research Council

TABLE 9-4

NUMBER OF PH.D. RECIPIENTS IN THE SOCIAL SCIENCES BY CITIZENSHIP AND VISA TYPE, 1960-1988

		U.S.		FOREIGN						
				Total		Immigrant		Non-Immigrant		Citizenship Unknown
YEAR	TOTAL	No.	%	No.	%	No.	%	No.	%	
1960	1,710	1,488	87.0	204	11.9	51	3.0	153	8.9	18
1961	1,810	1,574	87.0	204	11.3	38	2.1	166	9.2	32
1962	1,925	1,647	85.6	240	12.5	30	1.6	210	10.9	38
1963	2,035	1,759	86.4	230	11.3	59	2.9	171	8.4	46
1964	2,299	1,951	84.9	283	12.3	70	3.0	213	9.3	65
1965	2,379	2,028	85.2	315	13.2	75	3.2	240	10.1	36
1966	2,697	2,266	84.0	361	13.4	80	3.0	281	10.4	70
1967	3,160	2,666	84.4	414	13.1	126	4.0	288	9.1	80
1978	3,534	3,029	85.7	433	12.3	122	3.5	311	8.8	72
1969	4,035	3,452	85.6	504	12.5	152	3.8	352	8.7	79
1970	4,616	3,926	85.1	634	13.7	204	4.4	430	9.3	56
1971	5,285	4,503	85.2	718	13.6	242	4.6	476	9.0	64
1972	5,621	4,738	84.3	771	13.7	265	4.7	506	9.0	112
1973	5,945	4,986	83.9	846	14.2	258	4.3	588	9.9	113
1874	6,017	4,919	81.8	815	13.5	226	3.8	589	9.8	283
1975	6,209	5,253	84.6	839	13.5	228	3.7	611	9.8	117
1976	6,373	5,434	85.3	834	13.1	195	3.1	639	10.0	105
1977	6,365	5,340	83.9	805	12.6	203	3.2	602	9.5	220
1978	6,057	5,033	83.1	735	12.1	202	3.3	533	8.8	289
1979	5,943	4,957	83.4	736	12.4	179	3.0	557	9.4	250
1980	6,253	5,296	84.7	726	11.6	200	3.2	526	8.4	231
1981	6,505	5,463	84.0	772	11.9	200	3.1	572	8.8	270
1982	6,250	5,112	81.8	788	12.6	201	3.2	587	9.4	350
1983	6,055	5,020	82.9	757	12.5	187	3.1	570	9.4	278
1984	5,895	4,750	80.6	828	14.0	194	3.3	634	10.8	317
1985	5,720	4,536	79.3	875	15.3	212	3.7	663	11.6	309
1986	5,841	4,550	77.9	894	15.3	222	3.8	672	11.5	397
1987	5,718	4,351	76.1	892	15.6	242	4.2	650	11.4	475
1988	5,769	4,315	74.8	928	16.1	221	3.8	707	12.3	526
TOTAL	132,201	110,027	83.2	17,402	13.2	4,612	3.5	12,790	9.7	4,772

SOURCE: Office of Personnel Management, unpublished tabulations

TABLE 9-5

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN SOCIAL AND BEHAVIORAL SCIENCES AND SOCIAL WORK BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, SEPT 30, 1988

	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		ASIAN		AM. INDIAN		WHITE	
OCCUPATIONAL TITLE	TOTAL	WOMEN	% W	TOTAL	%	WOMEN	% W	No.	% B	No.	% H	No.	% A	No.	% I	No.	% W
Social Science	3412	1399	41.0	822	24.1	401	48.8	545	16.0	130	3.8	48	1.4	99	2.9	2590	75.9
Economics	5775	1298	22.5	539	9.3	206	38.2	264	4.6	101	1.7	159	2.8	15	0.3	5236	90.7
Foreign Affairs	3690	804	21.8	404	10.9	130	32.2	184	5.0	130	3.5	80	2.2	10	0.3	3286	89.1
International Relations	94	21	22.3	10	10.6	2	20.0	5	5.3	3	3.2	2	2.1	0	0.0	84	89.4
Foreign Agricultural Affairs	190	22	11.6	10	5.3	2	20.0	6	3.2	1	0.5	1	0.5	2	1.1	180	94.7
Manpower Research & Analysis	36	11	30.6	6	16.7	2	33.3	4	11.1	1	2.8	1	2.8	0	0.0	30	83.3
Geography	291	87	29.9	20	6.9	10	50.0	10	3.4	1	0.3	7	2.4	2	0.7	271	93.1
History	698	169	24.2	36	5.2	12	33.3	21	3.0	9	1.3	5	0.7	1	0.1	662	94.8
Psychology	4070	1141	28.0	300	7.4	130	43.3	140	3.4	74	1.8	58	1.4	28	0.7	3770	92.6
Sociology	101	41	40.6	8	7.9	1	12.5	3	3.0	2	2.0	3	3.0	0	0.0	93	92.1
Social Work	4510	2324	51.5	1150	25.5	681	59.2	728	16.1	207	4.6	67	1.5	148	3.3	3360	74.5
General Anthropology	55	16	29.1	5	9.1	2	40.0	1	1.8	2	3.6	1	1.8	1	1.8	50	90.9
Archeology	838	287	34.2	31	3.7	9	29.0	0	0.0	11	1.3	4	0.5	16	1.9	807	96.3
TOTALS	23760	7620	32.1	3341	14.1	1588	47.5	1911	8.0	672	2.8	436	1.8	322	1.4	20419	85.9

FIELD: Political Science

SOURCE: 1987-88 APSA Survey of Departments, American Political Science Association

TABLE 9-8

POLITICAL SCIENCE FACULTY BY STATUS, RANK, SEX AND TENURE STATUS, 1987-88

	Total Faculty				Professor			Associate Prof			Asst. Prof.			Instr/Lecturer			Nontenure Track		
	Total	F-T	P-T	%F-T	F-T	P-T	%F-T	F-T	P-T	%F-T	F-T	P-T	%F-T	F-T	P-T	%F-T	F-T	P-T	%F-T
Total	7,344	5,787	1,557	78.8	2,468	139	94.7	1,538	38	97.6	1,145	64	94.7	106	218	32.7	530	1,098	32.6
Men	6,121	4,950	1,171	80.9	2,297	125	94.8	1,306	32	97.6	853	43	95.2	69	157	30.5	425	814	34.3
Women	1,223	837	386	68.4	171	14	92.4	232	6	97.5	292	21	93.3	37	61	37.8	105	284	27.0
% Wom	16.7	14.5	24.8		6.9	10.1		15.1	15.8		25.5	32.8		34.9	28.0		19.8	25.9	
Black	283	201	82	71.0	43	3	93.5	44	3	93.6	74	3	96.1	10	9	52.6	30	64	31.9
% of Total	3.9	3.5	5.3		1.7	2.2		2.9	7.9		6.5	4.7		9.4	4.1		5.7	5.8	
Men	218	162	56	74.3	41	2	95.3	33	2	94.3	56	2	96.6	8	7	53.3	24	43	35.8
Women	65	39	26	60.0	2	1	66.7	11	1	91.7	18	1	94.7	2	2	50.0	6	21	22.2
% Wom	23.0	19.4	31.7		4.7	33.3		25.0	33.3		24.3	33.3		20.0	22.2		20.0	32.8	
Hispanic	120	87	33	72.5	27	1	96.4	24	1	96.0	23	2	92.0	2	7	22.2	11	22	33.3
% of Total	1.6	1.5	2.1		1.1	0.7		1.6	2.6		2.0	3.1		1.9	3.2		2.1	2.0	
Men	102	75	27	73.5	27	1	96.4	20	1	95.2	17	2	89.5	2	5	28.6	9	18	33.3
Women	18	12	6	66.7	0	0	--	4	0	100.0	6	0	100.0	0	2	0.0	2	4	33.3
% Wom	15.0	13.8	18.2		0.0	0.0		16.7	0.0		26.1	0.0		0.0	28.6		18.2	18.2	
Am Indian	4	4	0	100.0															
% of Total	0.1	0.1	0.0																
Men	3	3	0	100.0															
Women	1	1	0	100.0															
% Wom	25	25.0	--																
Asian	163	148	15	90.8															
% of Total	2.2	2.6	1.0																
Men	144	132	12	91.7															
Women	19	16	3	84.2															
% Wom	11.7	10.8	20.0																
Res Alien	173	136	37	78.6															
% of Total	2.4	2.4	2.4																
Men	146	115	31	78.8															
Women	27	21	6	77.8															
% Wom	15.6	15.4	16.2																

FIELD: Psychology

SOURCE: Graduate Departments of Psychology, 1986-87, American Psychological Association

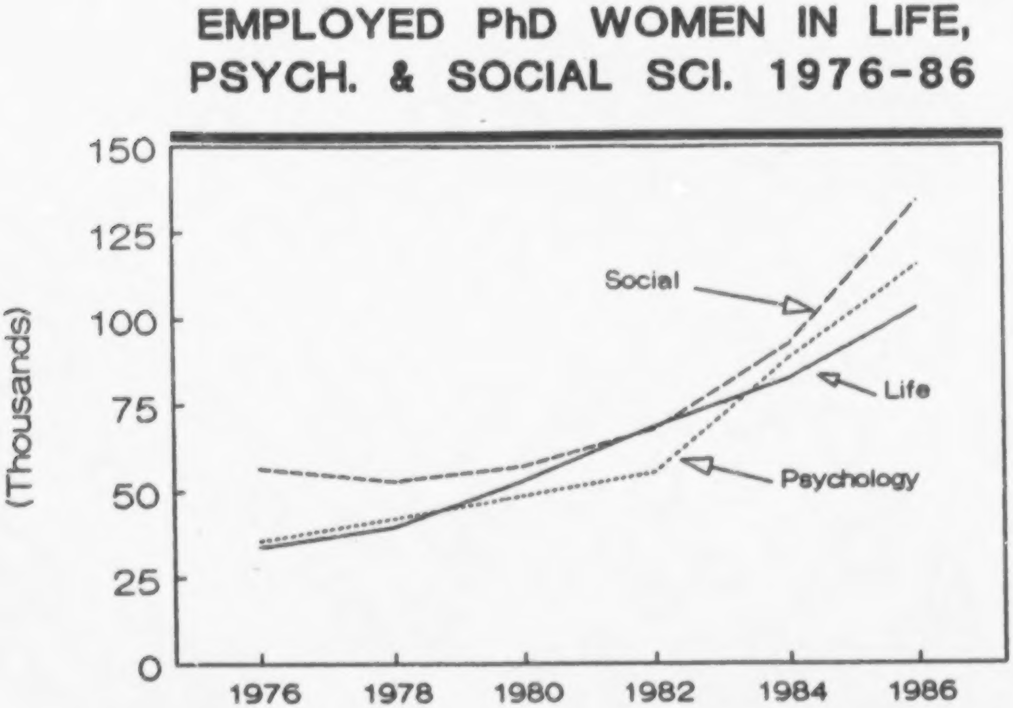
TABLE 9-9

FACULTY IN U.S. AND CANADIAN GRADUATE DEPARTMENTS OF PSYCHOLOGY, BY SEX AND RACE, 1986-87

Characteristic	U.S. Departments				All U.S. Departments	All Canadian Departments
	Doctoral		Master's			
	Public (N = 166) %	Private (N = 85) %	Public (N = 91) %	Private (N = 36) %	(N = 378) %	(N = 14) %
Total faculty:	4,006	1,598	1,292	318	7,213	499
Sex:						
Men	77	75	75	70	76	79
Women	23	25	24	30	24	21
Not specified	*	*	1	*	*	0
Race/ethnicity:						
White	95	92	95	95	94	88
Black	3	3	2	3	3	0
Hispanic	1	2	1	*	1	*
Asian	1	1	1	2	1	3
American Indian	*	*	*	0	*	0
Not specified	*	2	*	*	1	8

*Less than one percent

CHART 9-1



SOURCE: Science and Engineering Doctorates: 1960-85, National Science Foundation, 1987; and Doctorate Recipients from United States Universities, Summary Reports, 1972-88, National Research Council

TABLE 10-1

PHD AWARDS IN ARTS AND HUMANITIES BY SUBFIELD AND SEX, 1920-88

	CY 1920-FY 1972			FY 1973-FY 1982			FY 1983-FY 1986			FY 1987			FY 1988		
	Total	Women	%W	Total	Women	%W	Total	Women	%W	Total	Women	%W	Total	Women	%W
HUMANITIES TOTAL	60,010	12,663	21.1	44,548	16,083	36.1	13,911	6,170	44.4	3,504	1,574	44.9	3,553	1,574	44.3
History, Am, Euro, Gen.& Other(1)	15,556	2,076	13.3	5,480	1,066	19.5									
History, American (1)				1,403	328	23.4	834	273	32.7	197	66	33.5	209	77	36.8
History, European (1)				949	273	28.8	581	197	33.9	122	48	39.3	127	51	40.2
History of Science (2)	74	10	13.5	283	107	37.8	84	30	35.7	25	10	40.0	22	10	45.5
History, Gen. & Other (1,3)				1,328	356	26.8	839	267	31.8	243	78	32.1	245	79	32.2
Classics (4)	2,236	682	30.5	704	244	34.7	196	72	36.7	55	26	47.3	56	22	39.3
Comparative Literatere (5)				876	497	56.7	491	297	60.5	121	70	57.9	139	81	58.3
Linguistics	1,502	358	23.8	1,788	728	40.7	689	355	51.5	200	107	53.5	166	83	50.0
Speech & Debate (6)	4,357	717	16.5	931	282	30.3	157	67	42.7	37	15	40.5	36	15	41.7
Letters, General (7)							49	30	61.2	25	15	60.0	16	7	43.8
Letters, Other (7)							113	64	56.6	39	18	46.2	43	26	60.5
American Studies (8)				586	243	41.5	329	158	48.0	75	39	52.0	70	43	61.4
Archeology	314	114	36.3	250	116	46.4	113	62	54.9	31	17	54.8	23	8	34.8
Art, Fine & Applied (9)	889	246	27.7	20	4	20.0	0								
Art History & Criticism (9)	346	155	44.8	1,434	838	58.4	554	393	70.9	143	102	71.3	132	81	61.4
Music	2,501	348	13.9	3,824	976	25.5	1756	570	32.5	500	164	32.8	505	154	30.5
Philosophy	5,133	631	12.3	3,557	582	16.4	942	203	21.5	234	50	21.4	223	53	23.8
Religion (10)				1,591	429	27.0	712	148	20.8	181	39	21.5	216	46	21.3
Theater (11)				386	154	39.9	387	168	43.4	82	28	34.1	92	45	48.9
LANGUAGE & LITERATURE	27102	7326	343.1	19158	8860	46.2	5085	2816	55.4	1194	682	57.1	1233	693	56.2
Amer, & Eng. Lang. & Lit. (12)	11,782	2,715	23.0												
American (12)	779	235	30.2	2,157	898	41.6	780	411	52.7	190	106	55.8	186	92	49.5
English (12)	3,867	1,236	32.0	8,682	3,867	44.5	2117	1192	56.3	479	269	56.2	530	309	58.3
French (13)	1,529	661	43.2	2,057	1,327	64.5	417	298	71.5	103	76	73.8	100	71	71.0
German (13)	1,142	335	29.3	1,328	658	49.5	298	164	55.0	77	42	54.5	76	41	53.9
Italian (13)	108	34	31.5	203	86	42.4	67	35	52.2	21	13	61.9	14	9	64.3
Spanish (14)	1,338	451	33.7	2,012	965	48.0	572	335	58.6	133	89	66.9	137	84	61.3
Russian (13)	273	85	31.1	571	224	39.2	113	56	49.6	19	11	57.9	13	6	46.2
Slavic (13)	48	11	22.9				39	18	46.2	5	3	60.0	4	2	50.0
Chinese (15)							56	27	48.2	13	2	15.4	12	5	41.7
Japanese (15)							39	22	56.4	9	5	55.6	6	4	66.7
Hebrew (15)							44	11	25.0	13	4	30.8	11	4	36.4
Arabic (15)							30	7	23.3	8	1	12.5	14	3	21.4
Other Languages (13)	5,161	1,330	25.8	1,039	346	33.3	201	83	41.3	43	16	37.2	43	19	44.2
Humanities, General (16)	415	57	13.7	225	101	44.9	89	40	44.9	23	13	56.5	24	13	54.2
Humanities, Other	660	176	26.7	884	388	43.9	223	117	52.5	58	32	55.2	63	31	49.2

(1) Separated into "History, American, European," and "History, Other" in 1978. (2) Added in 1970 as "History and Philosophy of Science." Renamed "History of Science" in 1984. (3) "History, Other" combined with "History, General" in 1983. (4) Name changed from "Foreign Language & Lit., Classical" in 1966 and renamed "Classics" in 1983. (5) Added in 1976. (6) Originally named "Speach as a Dramatic Art." In 1962, Dramatic Arts" was added. (7) Added in 1983. (8) Added in 1973. (9) In 1968, "Art, Fine & Applied: was broken out into "Art, Applied" & " Art, History & Criticism." (10) Added in 1973. (11) Added in 1978 as "Theater and Theater Criticism." Renamed "Theater" in 1983. (12) This group was separated in 1968. (13) Called "Modern Foreign Language, Unspecified" until 1965, "Other Languages" in 1979, and separated in 1983. (14) "Spanish and Portuguese" prior to 1983. (15) Separated from "Other Languages" in 1983.

SOURCE: Humanities Doctorates in the United States: 1987 Profile, National Research Council

TABLE 10-2

DEMOGRAPHIC CHARACTERISTICS OF HUMANITIES PHDS BY FIELD OF PHD, 1987

		Field of Doctorate									
Demographic Characteristics	All Fields	Amer History	"Other History"	Art History	Music	Speech/ Theater	Phil- osophy	English/ Amer Lang & Lit	Clas- sical Lang & Lit	Modern Lang & Lit	"Other Human- ities"
Total Population (N)	95,000	9,500	12,500	2,800	7,400	4,100	7,200	24,600	1,900	16,600	8,400
Gender											
Male	69.1	85.1	79.3	46.6	76.7	75.2	84.4	63.1	69.7	65.6	64.6
Female	30.9	14.9	20.7	53.4	23.3	24.8	15.6	36.9	30.3	44.4	35.4
Racial/Ethnic Group											
White	93.0	94.7	94.0	94.7	93.9	95.5	95.5	95.7	98.3	85.1	91.5
Minority Group	6.5	4.3	5.7	5.1	5.9	3.9	4.4	3.8	1.7	14.7	7.5
Hispanic	3.0	0.6	1.7	1.5	0.6	0.3	1.3	1.3	0.5	11.2	2.4
Black	1.8	3.1	1.7	1.1	3.6	2.4	0.4	1.5	0.7	1.5	2.0
Asian	1.4	0.5	1.6	2.3	1.4	0.5	2.3	0.9	0.1	1.8	2.9
American Indian	0.2	0.1	0.6	0.1	0.3	0.7	0.3	0.1	0.4	0.2	0.2
Other	0.1	0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1
No Report	0.4	0.7	0.3	0.1	0.1	0.5	0.1	0.4	0.0	0.2	0.9
Age in 1987											
Under 30	0.2	0.0	0.3	0.0	0.1	0.0	0.4	0.0	0.6	0.1	0.5
30-39	17.3	12.8	13.2	23.3	24.8	12.7	18.2	16.3	16.7	16.7	25.7
40-49	39.8	42.6	38.3	40.8	37.5	33.4	42.1	39.0	40.6	39.9	43.0
50-59	23.9	25.1	28.9	20.8	22.2	25.5	21.6	24.7	23.0	23.1	18.2
60 and over	18.4	19.5	18.5	14.4	14.2	27.5	17.3	19.7	18.9	19.7	12.3
No Report	0.5	0.0	0.9	0.7	1.1	0.8	0.4	0.3	0.3	0.5	0.2
Median Age (Years)	47	48	48	45	45	51	46	48	47	48	44
Year of Doctorate											
1944-1949	2.1	1.9	3.6	0.8	0.8	1.9	2.1	2.3	3.3	2.2	0.9
1950-1959	9.5	13.5	10.3	6.7	6.2	10.2	10.7	9.2	11.0	9.2	7.2
1960-1969	21.4	23.1	25.3	15.0	14.2	30.6	22.8	23.5	29.0	19.1	12.8
1970-1979	44.4	45.0	42.9	47.6	44.2	35.9	44.0	45.6	39.2	47.2	42.1
1980-1986*	22.7	16.5	17.9	29.9	34.6	21.4	20.4	19.4	17.6	22.3	37.1
1980 (1/80-6/80)	2.2	1.7	2.2	2.1	2.4	1.8	1.8	2.2	2.3	1.7	3.7
1981-1982 (7/80-6/82)	7.0	4.8	6.3	9.4	9.7	6.4	6.6	6.2	5.9	7.6	9.4
1983-1984 (7/82-6/84)	6.8	5.0	5.3	9.9	11.0	6.9	5.9	5.4	4.9	7.1	10.9
1985-1986 (7/84-6/86)	6.7	5.0	4.1	8.5	11.5	6.3	6.1	5.6	4.5	5.9	13.1
Citizenship											
U.S.	97.0	99.1	98.6	94.7	98.0	98.3	97.4	98.5	96.2	92.2	96.7
Foreign**	2.9	0.9	1.4	5.3	2.0	1.6	2.6	1.4	3.8	7.8	3.3
No Report	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0

FIELD: Linguistics

SOURCE: Series of Earned Degrees Conferred, 1955-87, National Center for Education Statistics

TABLE 10-3

DEGREES IN LINGUISTICS BY SEX AND LEVEL OF DEGREE, 1970-71 - 1986-87

YEAR	BACHELORS Both Sexes	Women Only	% Women	MASTERS Both Sexes	Women Only	% Women
1955-56 thru 1959-60	171	76	44.4	287	113	39.4
1960-61 thru 1969-70	1127	575	51.0	2066	859	41.6
1970-71	254	171	67.3	352	179	50.9
1971-72	296	186	62.8	373	199	53.4
1972-73	442	290	65.6	452	228	50.4
1973-74	431	315	73.1	455	248	54.5
1974-75	434	305	70.3	506	279	55.1
1975-76	534	371	69.5	523	313	59.8
1976-77	564	399	70.7	552	326	59.1
1977-78	596	408	68.5	522	313	60.0
1978-79	585	408	69.7	503	297	59.0
1979-80	553	418	75.6	522	315	60.3
1980-81	551	408	74.0	498	307	61.6
1981-82	534	376	70.4	516	305	59.1
1982-83	472	355	75.2	597	357	59.8
1983-84	476	333	70.0	678	427	63.0
1984-85	490	350	71.4	633	409	64.6
1985-86	470	329	70.0	627	419	66.8
1986-87	474	334	70.5	541	346	64.0
TOTALS	9,454	6,407	67.8	11,203	6,239	55.7

SOURCE: Doctorates Awarded from 1920 to 1971 and Doctorate Recipients from United States Universities, Summary Reports 1971-1988, National Research Council

TABLE 10-4

DOCTORAL DEGREES BY SEX, 1920-1988

YEAR	TOTAL BOTH SEXES	WOMEN ONLY	% WOMEN
CY 1920 thru FY 1959*	293	68	23.2
FY 1960 thru FY 1969	738	167	22.6
FY 1970 thru FY 1975	1,039	326	31.4
FY 1976	152	70	46.1
FY 1977	190	73	38.4
FY 1978	175	65	37.1
FY 1979	155	77	49.7
FY 1980	182	75	41.2
FY 1981	176	78	44.3
FY 1982	191	90	47.1
FY 1983	164	86	52.4
FY 1984	160	82	51.3
FY 1985	176	91	51.7
FY 1986	189	96	50.8
FY 1987	200	107	53.5
FY 1988	166	83	50.0
TOTAL	**4,346**	**1,634**	**37.6**

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 to the present.

SOURCE: Science and Engineering Doctorates: 1960-85, National Science Foundation, 1987; and Doctora
Recipients from United States Universities, Summary Reports, 1972-88, National Research Coun

TABLE 10-5

PHD AWARDS IN EDUCATION BY SUBFIELD AND SEX, 1960-88

SUBFIELD	CY 1920-FY 1972			FY 1973-FY 1982			FY 1983-FY 1986			FY 1987			FY 1988	
	Total	Women	%W	Total	Women	%W	Total	Women	%W	Total	Women	%W	Total	Women
EDUCATION, TOTAL (1)	69,374	13,878	20.0	74,419	27,763	37.3	27,246	14,131	51.9	6,447	3,550	55.1	5,697	3,156
Curriculum and Instruction	547	188	34.4	7,932	3,547	44.7	3,330	2,054	61.7	761	479	62.9	810	503
Ed Admin & Supervision (5)	12,610	1,053	8.4	15,104	3,639	24.1	6,400	2,677	41.8	1685	783	46.5	1737	820
Educational Media (4)	624	67	10.7	859	216	25.1	350	155	44.3	68	36	52.9	67	26
Ed Statistics & Research (12)				1,015	344	33.9	322	167	51.9	73	40	54.8	50	26
Ed Testing, Eval, & Meas(12)	691	110	15.9	1,016	344	33.9	198	[illegible]	40.5	37	20	54.1	55	26
Ed & School Psychology (4)	3,165	924	29.2	4,629	2,063	44.6	1,608	915	56.9	410	238	58.0		
Educational Psychology (14)													321	200
School Psychology (14)													98	53
Social Foundations	2,361	535	22.7	2,169	724	33.4	549	233	42.4	114	56	49.1	122	56
Special Education (4)	1,918	535	27.9	3,132	1,590	50.8	1,205	831	69.0	248	185	74.6	257	194
Student Counselling, Pers (4)	4,909	1,046	21.3	6,260	2,429	38.8	1,602	814	50.8	315	176	55.9	322	185
Higher Education (3)	522	96	18.4	6,352	2,050	32.3	2,481	1,233	49.7	568	307	54.0	399	222
Pre-elementary Education (10)							268	218	81.3	73	64	87.7	83	73
Elementary Education (2)	2,644	1,096	41.5	2,117	1,310	61.9	423	309	73.0	105	85	81.0	93	71
Secondary Education(2)	2,212	375	17.0	1,668	567	34.0	306	167	54.6	66	31	47.0	68	38
Adult & Continuing Ed (3)	251	52	20.7	1,873	675	36.0	870	465	53.4	204	125	61.3	229	125
TEACHING FIELDS	36920	7801	21.1	20293	8265	40.7	7334	3797	51.8	1720	925	53.8	986	538
Agricultural Education (2)	459	8	1.7	278	13	4.7	173	25	14.5	39	5	12.8	32	
Art Education (6)	369	103	27.9	534	252	47.2	185	102	55.1	52	33	63.5	42	27
Business Education (6)	685	201	29.3	682	266	39.0	216	126	58.3	36	21	58.3	44	17
English Education (6)	563	164	29.1	795	415	52.2	295	197	66.8	72	54	75.0	57	41
Foreign Languages Ed (6)	168	49	29.2	322	164	50.9	116	62	53.4	37	16	43.2	53	36
Health Eduation (10)							363	242	66.7	91	61	67.0	86	67
Home Economics Education (6)	256	248	96.9	309	302	97.7	89	84	94.4	17	17	100	17	17
Industrial Arts Education (6)	527	2	0.4	422	13	3.1	79	7	8.9	24	4	16.7	11	2
Mathematics Education (6)	908	150	16.5	874	272	31.1	263	135	51.3	74	38	51.4	55	31
Music Education (6)	906	125	13.8	1,002	297	29.6	378	132	34.9	109	56	51.4	76	29
Nursing Education (11)				89	88	98.9	99	93	93.9	36	36	100	34	32
Physical Education (13)	2,861	783	27.4	3,476	1,209	34.8	885	358	40.5	192	80	41.7	183	82
Reading Education (8)				1,045	802	76.7	558	440	78.9	94	82	87.2	74	63
Science Education (2)	1,574	306	19.4	1,139	262	23.0	308	112	36.4	63	23	36.5	67	27
Social Science Education (6)	500	90	18.0	528	153	29.0	106	47	44.3	17	9	52.9	23	5
Speech Education (7)				125	73	58.4	24	15	62.5	5	4	80.0	5	4
Technical Education (14)													13	3
Trade & Industrial Ed (6)	461	26	5.6	1,914	545	28.5	423	147	34.8	69	20	29.0	67	26
Other Teaching Fields (9)	750	309	41.2	827	495	59.9	196	96	49.0	38	19	50.0	47	27
Education, General (1)	24,816	4,896	19.7	3,844	1,584	41.2	1,313	669	51.0	369	192	52.0	363	196
Education, Other (2)	1,117	341	30.5	2,088	1,060	50.8	1,265	708	56.0	286	155	54.2	279	155

(1) "Education," many fields listed as a single field until 1960, then as 16 subfields plus "Education, Genaral." in 1960. (2) Adde
1966. (3) Added in 1971. (4) Added in 1962, split into "Educational Psychology" & "School Psych" in 1989 (5) Added in 1960 as "Ad
istration" changed in 1962 to "Admin, & Supervision." (6) Added in 1963. (7) Added in 1975. (8) Added in 1976. (9) Added in 196
"Other Special Field," changed in 1968 to "Other Fields" (meaning other teaching fields). (10) Added in 1983. (11) Added in 1980.
(11) Name changed in 1983. (13) Name changed from "Physical Education, Health & Recreation" to Physical Education" in 1983.
(14) Added in 1989.

SOURCE: Series of Earned Degrees Conferred, 1971-87, National Center for Education Statistics

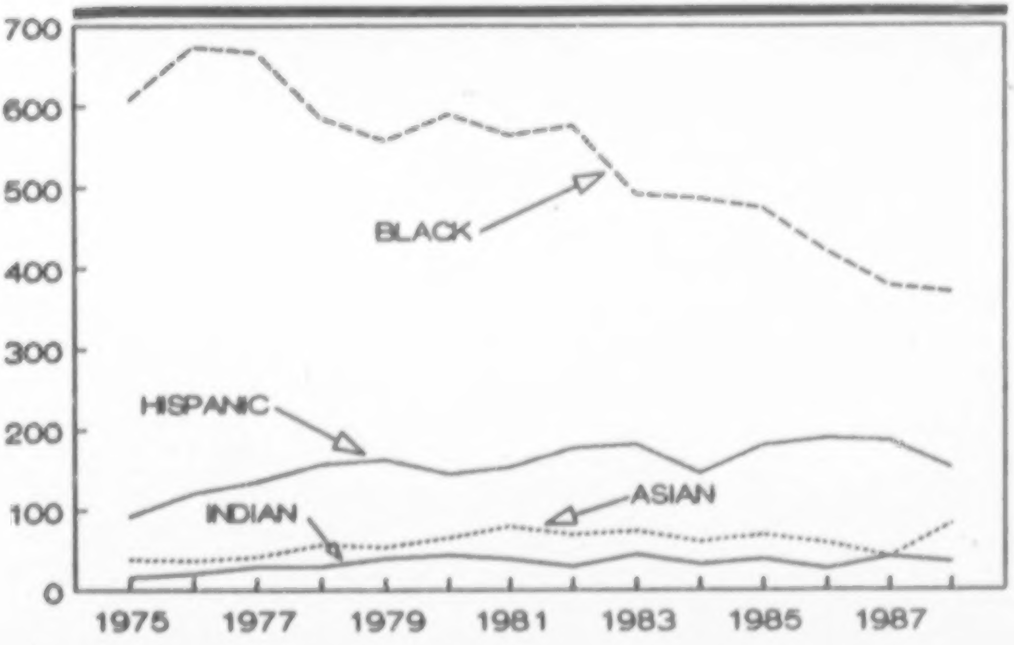
TABLE 10-6

DEGREES IN EDUCATION BY SEX AND LEVEL OF DEGREE, 1970-71 - 1986-87

	BACHELORS			MASTERS			DOCTORATES		
YEAR	Both Sexes	Women Only	% Women	Both Sexes	Women Only	% Women	Both Sexes	Women Only	% Women
1970-71	177,638	132,236	74.4	89,067	50,020	56.2	6398	1355	21.2
1971-72	192,368	142,492	74.1	98,280	56,355	57.3	7041	1660	23.6
1972-73	195,640	142,816	73.0	105,646	61,450	58.2	7314	1813	24.8
1973-74	186,623	137,088	73.5	112,739	67,553	59.9	7293	1977	27.1
1974-75	168,749	123,703	73.3	120,233	74,733	62.2	7443	2296	30.8
1975-76	156,528	114,026	72.8	128,410	82,591	64.3	7769	2593	33.4
1976-77	143,658	103,740	72.2	126,375	83,201	65.8	7955	2769	34.8
1977-78	137,742	99,842	72.5	118,957	80,548	67.7	7586	2956	39.0
1978-79	127,853	93,568	73.2	111,834	76,734	68.6	7731	3263	42.2
1979-80	120,680	89,214	73.9	103,720	72,762	70.2	7940	3521	44.3
1980-81	108,265	81,196	75.0	98,381	70,301	71.5	7900	3736	47.3
1981-82	101,063	76,678	75.9	93,104	67,333	72.3	7676	3727	48.6
1982-83	97,991	74,321	75.8	84,853	61,621	72.6	7551	3787	50.2
1983-84	92,382	70,176	76.0	77,187	55,606	72.0	7473	3770	50.4
1984-85	88,161	66,897	75.9	76,137	55,192	72.5	7151	3723	52.1
1985-86	87,221	66,235	75.9	76,353	55,634	72.9	7110	3795	53.4
1986-87	87,115	66,345	76.2	75,501	55,859	74.0	6909	3792	54.9
TOTALS	2,269,677	1,680,573	74.0	1,696,777	1,127,493	66.4	126,240	50,533	40.0

CHART 10-1

EDUCATION PhD AWARDS TO MINORITIES, 1975 - 1988



SOURCE: Office of Personnel Management, unpublished tabulations

TABLE 10-7

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN EDUCATION BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, SEPT 30, 1988

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		ASIAN		AM. INDIAN		WHITE	
	TOTAL	WOMEN	% W	TOTAL	%	WOMEN	% W	No.	% B	No.	% H	No.	% A	No.	% I	No.	% W
General Education & Training	12734	9729	76.4	1588	12.5	1311	82.6	976	7.7	306	2.4	191	1.5	115	0.9	11146	87.5
Education & Vocational Training	10826	5771	53.3	2461	22.7	1574	64.0	794	7.3	390	3.6	204	1.9	1073	9.9	8365	77.3
Education Program	488	240	49.2	170	34.8	106	62.4	138	28.3	23	4.7	5	1.0	4	0.8	318	65.2
Public Health Education	34	21	61.8	17	50.0	12	70.6	1	2.9	0	0.0	1	2.9	15	44.1	17	50.0
Education Research	80	29	36.3	10	12.5	2	20.0	4	5.0	3	3.8	3	3.8	0	0.0	70	87.5
Education Services	50	9	18.0	8	16.0	1	12.5	4	8.0	3	6.0	0	0.0	1	2.0	42	84.0
Instructional Systems	72	28	38.9	12	16.7	4	33.3	9	12.5	1	1.4	1	1.4	1	1.4	60	83.3
Museum Crurator	345	123	35.7	27	7.8	27	100.0	13	3.8	4	1.2	3	0.9	7	2.0	318	92.2
TOTALS	24629	15950	64.8	4293	17.4	3037	70.7	1939	7.9	730	3.0	408	1.7	1216	4.9	20336	82.6

BIBLIOGRAPHY AND DATA SOURCES

Admissions Testing Program of The College Board, 45 Columbus Avenue, New York, NY 10023-6917

National Report, College Bound Seniors, 1986, 1987 and 1988 copyright by The College Board

Profiles: College board Seniors, 1985, ISBN 0-87447-262-8, copyright by The College Board

American Assembly of Collegiate Schools of Business, 760 Office Parkway, Suite 50, Creve Cour, MO 63141

Survey of Student Demographics 1985-86 and 1986-87

Personal Communication, October 1989

American Association of Colleges of Osteopathic Medicine, 6110 Executive Blvd., Suite 405, Rockville MD 20852

Annual Statistical Report, 1981 through 1989

Personal Communication, December 1985, October 1989

American Association of Colleges of Pharmacy, 1426 Prince Street, Alexandriva, VA 22314

Degrees Conferred by Schools and Colleges of Pharmacy, 1975-76 thru 1986-87

Enrollment Report on Professional Degree Programs in Pharmacy, Fall 1976 through Fall 1988

Enrollments in Schools and Colleges of Pharmacy, 1987-88

American Association of Colleges of Podiatric Medicine, 6110 Executive Blvd., Suite 204, Rochville, MD 20852

Reprints from Colleges of Podiatric Medicine Annual Reports to AACPM, 1976-1988

Personal Communication November 1989

American Association of Dental Schools, 1619 Massachusetts Avenue, N.W., Washington, DC 20036
American Dental Association, Division of Educational Measurements, 211 E. Chicago Avenue, Chicago, IL 60611

Annual Report on Dental Education Series, 1973-74 through 1988-89

Dental Faculty Information; Suppl. to Annual Report on Dental Education Series, 1985-86 and 1988-89

Personal communication, April 1983; June 1984, November 1989

Trend Analysis, Supplement 11 to the Annual Report on Dental Education, 1985-86 through 1988-89

American Bar Association, 1155 East 60th Street, Chicago, IL 60637

A Review of Legal Education in the United States - Fall 1977 and Fall 1980 through Fall 1987; - Law Schools and Bar Admission Requirements, Section of Legal Education and Admission to the Bar, copyright by A.B.A.

American Chemical Society, 1155 - 16th Street, N.W., Washington, DC 20036

"Committee on Professional Training Annual Report," **C&EN** July 4, 1988, June 19,1989 and October 23 1989

1976 and 1978 Report of Chemists' Salaries and Employment Status, July 1976; June 1978;

Salaries 1981, July 1981; Salaries 1983, June 1983; Salaries 1985, October 1985; Salaries 1987, September 1987; Salaries 1989, July 1989.

"Survey of Women on College and University Chemistry Faculties," Women Chemist March 1989

American Council on Education, One Dupont Circle, N.W., Washington, DC 20036

American College Testing Program as reported in the Chronicle of Higher Education

The American Freshman: National Norms for Fall 1971 and Fall 1972, ACE Research Reports, Vol. 6, No. 6, 1971 and Vol. 7, No. 5, 1972

1986-87 Fact Book on Higher Education, copyright 1987 by American Council on Education and publisher Macmillan Publishing Company, 833 Third Avenue, New York, NY 10022

"Getting to the Top - Women CEOs in Higher Education," by Judy Touchton, Comment, May 1984, Office of Women in Higher Education; and personal communication, September 1985 and November 1989

Minorities in Higher Education, Fourth, Fifth and Seventh Annual Status Report

American Council on Education/Office of Research and Cooperative Institutional Research Program, University of California at Los Angeles, Graduate School of Education, 405 Hilgard Avenue, Los Angeles, CA 90024

The American Freshman: National Norms for Fall 1973 through 1988, Office of Research and Cooperative Institutional Research Program, University of California at Los Angeles

American Geological Institute, 4220 King Street, Alexandria, VA 22302

Student Enrollment in Geoscience Departments 1975-76 through 1981-82, 1985-86 and 1987-88 Series

Unpublished Data

"Women in Academia: Students and Professors Revisted," Geology, Vol. 15, August 1987

American Institute of Architects, 1735 New York Avenue, N.W., Washington DC 20006

Personal communication, December 1985, October 1987 and November 1989

American Institute of Certified Public Accountants, 1211 Avenue of the Americas, New York, NY 10036

Minority Recruitment and Equal Opportunity Committee 1981 through 1988 Report by Sharon L. Donahue

American Institute of Physics, 335 East 45th Street, New York, NY 10017

Enrollments and Degrees, AIP Pub. No. R-151.26, July 1989

1986-87 Nationwide Survey of Secondary School Teachers of Physics by Michael Neuschatz and Maude Covalt, June 1988

Graduate Student Survey, AIP Pub. No. R-207.14, May 1982; R-207.16, 1984; R-207.18, August 1986; R-207-19, September 1987; and R-207-20, September 1988

American Mathematical Society, Box 6248, Providence, RI 02904

Notices, Vol. 25, No. 6, Issue No. 188, October 1978; Vol. 29, No. 7, Issue 221, November 1982; Vol. 31, No. 7, November 1984; Vol. 33, November 1986; Vol. 34 November 1987 and vol 36, June 1989

"First Report on the 30th Annual Survey 1986," Notices, Vol. 33, No. 7, November 1986;

American Medical Association, 535 N. Dearborn Street, Chicago, IL 60610

Journal of the American Medical Association, Vol. 234, No. 13, December 29, 1975; Vol. 238, No. 26, December 26, 1977; Vol. 240, No. 26, December 20, 1978; Vol 243, No. 9, March 1980; Vol. 246, No. 25, December 1981; Vol. 248, No. 24, December 24/31, 1982, and Vol. 250, No. 12, September 23/30, 1983, copyright by AMA. See also **Association of American Medical Colleges**

American Optometric Association, 600 Maryland Avenue, S.W., Washington, DC 20002

Information from surveys conducted by the Council on Optometric Education

American Podiatry Association, 20 Chevy Chase Circle, N.W., Washington, DC 20015

Personal communication, 1985, 1987 and 1989

American Political Science Association, 1527 New Hampshire Avenue, N.W., Washington, DC 20036

1987-88 APSA Survey of Departments, 1989

Graduate Students and Faculty in Political Science: Ph.D. and M.A. Degrees, 1989

American Psychological Association, 1200 - 17th Street, N.W., Washington, DC 20036

Graduate Departments of Psychology, 1986-87, September 1988

American Veterinary Medical Association/Association of American Veterinary Medical Colleges
1522 K Street, N.W., Suite 828, Washington, DC 20005

Personal Communication, November 1980, January 1982; April 1983; June 1984; December 1985; July 1987 and October 1989

Association of American Medical Colleges, One Dupont Circle, N.W., Washington DC 20036

"Medical Student Enrollment," 1973-74 through 1977-78, Journal of Medical Education, Vol. 53, April 1978; and unpublished data

Minority Students in Medical Education, Facts and Figures III, IV and V, March 1987, March 1988 and June 1989

Personal Communication, October 1989

Association of Schools & Colleges of Optometry, 600 Maryland Avenue, S.W., Suite 410, Washington, DC 20024

Unpublished Data, 1989

Association of Schools of Public Health, 1015 Fifteenth Street, N.W., Suite 404, Washington DC 20005

Unpublished Data, Compiled from 1974-75 through 1986-87

Chronicle of Higher Education, 1255 Twenty Third St., N.W., Suite 785, Washington DC 20037

Chronicle of Higher Education Almanac, September 6, 1989

Civil Service Commission, U.S. SEE **Office of Personnel Management, U.S.**

College Entrance Examination Board, Educational Testing Service (ETS), SEE **Admissions Testing Program**

Commerce, U.S. Department of, Bureau of the Census, Washington, DC 20233

Historical Statistics of the U.S.

1980 Census of Occupations, Special EEO File; and Supplementary Report, May 1981

Current Population Reports, Series P-20

Special Report on Hispanics, 1987

Personal Communication, 1989

Commission on Professionals in Science and Technology, 1500 Massachusetts Avenue, N.W., Suite 831, Washington D. C. 20005

General Information

Council of Graduate Schools, One Dupont Circle, Suite 430, Washington DC 20036

"Early Release Data from CGS/GRE Enrollment Survey" by Peter Syverson, CGS Communicator, v. XXII, No. 1, January 1989

Education, U.S. Department of, National Center for Education Statistics, 400 Maryland Avenue, S.W. Washington, DC 20202

The Condition of Education, 1989 Edition, Vol. 1 (CS89-750) and Vol. 2 (CS 89-651)

Degrees and Other Formal Awards Conferred, 1986-87 Survey, unpublished.

Data on Enrollments in Higher Education by Race, Ethnicity and Sex, 1985, Office for Civil Rights, Unpublished

Digest of Education Statistics, 1988, CS 88-600

Earned Degrees Conferred, Series 1947-48 through 1985-86

Fall Enrollment in Higher Education 1987 as published in the Chronicle of Higher Education, September 6, 1989

Preliminary Releases, National Estimates and Unpublished Data November 1989

Projections of Education Statistics to 1992-93, NCES 85-408

Women's Participation in First-Professional Degree Programs in Medicine, Dentistry, Veterinary Medicine, and Law, 1969-70 through 1974-75, NCES 76-023

Education, U. S. Department of, Office of Educational Research and Improvement, Washington, DC 20208

High School and Beyond, Longitudinal Survey, First Follow-up; Second Follow-up, October 1985

Educational Testing Service, Graduate Record Examinations Program, Princeton, NJ 08541

The Mathematics Report Card, June 1988

The Science Report Card, September 1988

Energy, U.S. Department of, Washington, DC 20425

Manpower Assessment Brief, March 1989 (DOE/ER 0873-1

Nuclear Engineering Enrollments and Degrees, 1988, DOE/ER-0370, May 1988

Health Physics/Radiation Protection Enrollments and Degrees, 1987, DOE/ER-0371, June 1988

Engineering Manpower Commission, 415 Second Street, N.E., Suite 200, Washington, DC 20002

Engineering and Technology Degrees, 1969 through 1989 Series

Engineering and Technology Enrollments, 1969 through 1988 Series

Equal Employment Opportunities Commission 2401 E Street, NW, Washington DC

Higher Education Staff Information Report, File 1985, Unpublished

Health and Human Services, U.S. Department of, Health Resources Administration, Washington DC 20201

Monthly Vital Statistics Report, v. 38, No. 3 Supplement, June 29, 1989

Minorities and Women in the Health Fields, May 1974; and 1987 Edition, (HRSA) HRS-P-DV 87-1

Personal Communication, Health Resources and Services Administration, October 1989

Institute of International Education, 809 United Nations Plaza, New York, NY 10017

Open Doors, 1987/88, 1989

Labor, U.S. Department of, Bureau of Labor Statistics, Washington, DC 20212

Current Population Survey, unpublished, 1988; and personal communication, October 1989

Employment and Earnings Series, 1960, 1970, 1975, 1980, 1985, and January 1988

"Labor Force Projections: 1986 to 2000," Monthly Labor Review, September 1987

Minority MBA, 14540 Hamlin St., Van Nuys, CA 91411

"Demographic Data from the Graduate Business Student Community" Fact Sheet 1989

National Academy of Sciences/National Research Council, 2101 Constitution Ave., N.W., Washington, DC 20418

Doctorates Awarded 1920 to 1971 by Subfield of Doctorate, Sex and Decade, March 1973

Doctorate Records File

Humanities Doctorates in the United States, 1987 Profile

Summary Report, Doctorate Recipients from United States Universities, 1962-88 Series

Biennial Survey of Earned Doctorates, Unpublished Data 1987

National Center for Education Statistics, SEE **Education, U.S. Department of**

National Center for Health Statistics, Room 1-57, 3700 East West Highway, Hyattsville, MD 20782

Personal Communication, 1989

National Education Association, Office of Research, 1201 - 16th Street, N.W., Washington, DC 20036

Estimates of School Statistics, 1980-81, 1981-83, 1982-83, 1983-84, 1984-85, 1985-86, and 1986-87

Status of the American Public School Teacher 1985-86, July 1987

National Science Foundation, 1800 G Street, N.W., Washington, DC 20550

Academic Science, Graduate Enrollment and Support, Fall 1980, Detailed Statistical Tables, NSF 81-330, 1981; Fall 1981, NSF 83-305; Fall 1982, NSF 84-306, Fall 1986 and Selected Data, Fall 1987, SRS unpublished

Characteristics of Doctoral Scientists and Engineers in the United States: 1987 (NSF 88-331

Early Release of Summary Statistics on Academic Science/Engineering Resources, October 1989

Federal Scientists and Engineers: 1988, Detailed Statistical Tables (NSF 89-322)

Foreign Citizens in U.S. Science and Engineering: History, Status and Outlook, Special Report, NSF 86-305 Revised, December 1986

Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, September 1981

Science and Engineering Doctorates: 1960-1988 (NSF 89-320)

U.S. Scientists and Engineers 1986 (NSF 87-322)

Women and Minorities in Science and Engineering, January 1986 and 1988, NSF 86-301 and NSF 88-3-1

National Science Teachers Association, 1742 Connecticut Avenue, N.W., Washington, DC 20009

1985-86 Survey of Science and Math Teachers, unpublished

Office of Personnel Management, U.S., Washington, DC 20415

Federal Civilian Workforce Statistics, Affirmative Employment Statistics, September 30, 1988

Population Reference Bureau, 2213 M Street, N.W., Washington, DC 20036

Asian Americans: Growth, Change and Diversity, 1985

Women's College Coalition, 1725 K Street, N.W., Washington, DC 20006

Profile of Women's College Presidents, December 1984 and September 1985

INDEX

A

- **Accounting**
  - As Freshman Career Choice 23
  - Minorities
    - Employed 79, 81
    - Placement 79
  - Women
    - Degrees 73, 80
    - Employed 79, 80
- **A.C.T Scores** 15
- **Administrators** 101
- **Affirmative Action**
  - Defined 4
  - Enforcement 3
  - Executive Orders Requiring 3
- **Age** 8, 91, 104, 107
  - and School Yrs Completed 87, 90
- **Agribusiness**
- **Agriculture**
  - Citizenship 38, 40, 127
  - Freshman Plans for Major 16, 22
  - Minorities
    - Degrees 42, 44, 63-65, 91
    - Employed 96, 98-100, 102-103
      - Faculty 117, 128
      - Government 208
    - Enrollments 36-37
  - Women
    - Degrees 42, 56-60, 63-69, 72, 91, 201, 203-205
    - Employed 96-102
      - Faculty 115, 117-120, 126, 128
      - Government 206
    - Enrollments 34-35, 39
- **American Indians See Minorities**
- **Anatomy** 202
- **Anthropology**
  - Citizenship 38, 40, 127
  - Minorities
    - Degrees 233
    - Employed 241
    - Enrollments 36-37
  - Women
    - Degrees 62, 233, 235-237
    - Employed 240
      - Faculty 115, 241
    - Enrollments 34-35, 39
- **Archeology 239**
- **Architecture/Environmental Design**
  - As Freshman Career Choice 23
  - Freshman Plans for Major 16, 22
  - Minorities
    - Degrees 63-65
    - Employed 92, 105
    - Enrollments 78
  - Women
    - Degrees 56, 60, 63-65, 72-73, 76
    - Employed 92
    - Enrollments 78
- **Area Studies**
  - Minorities Degrees 63-65
  - Women Degrees 56, 60, 63-65, 72
- **Art**
  - As Freshman Career Choice 23
  - Freshman Plans for Major 16, 22
  - Women
    - Degrees 62-65, 72, 243
    - Employed 93
- **Art History** 243
- **Arts and Humanities See Humanities**
- **Asian PHDs, Citizenship 45**
- **Asian American See Minorities**
- **Assessment**
  - In Mathematics 10
  - In Science 10
- **Associate Degrees** 72, 197
- **Astronomy**
  - Citizenship 38, 40, 127, 145, 148
  - Minorities
    - Employed 97,103, 146
    - Enrollments 36-37
  - Women
    - Degrees 62, 144
    - Employed 99, 100, 103, 146
      - Faculty 115, 126
    - Enrollments 34-35, 39, 147-148
- **Atmospheric Sciences**
  - Citizenship 38, 40, 127
  - Minorities 36-37, 96, 103
  - Women
    - Degrees 62,
    - Employed 96, 100, 101, 103
      - Faculty 115, 117, 126
    - Enrollments 34-37, 39
  - See Also Geo & Environmental Sciences
- **Attainment Rates, Graduate Degrees 71**

B

- **Behavioral Sciences See Psychology**
- **Biochemistry**
  - Citizenship 38, 40, 127
  - Minorities 36-37
  - Women
    - Degrees 62, 138
    - Enrollments 34-36, 39
- **Biological Sciences**
  - Citizenship 38, 40 ,127
  - Exam Scores 14-16
  - Freshman Plans for Major 16, 22
  - High School Courses Taken 12, 16
  - Minorities
    - Degrees 63-67, 91
    - Employed 92, 96, 98-100, 102-103
      - Faculty 115, 117, 120, 128
      - Government 208
    - Enrollments 36-37
  - Women
    - Degrees 56-60, 62-65, 91, 110, 202, 203-205
    - Employed 92, 96-102, 105
      - Faculty 115, 117-120, 126, 128
      - Government 208
    - Enrollments 34-35, 39
  - See Also Life Sciences
- **Births U.S.** 5
- **Black See Minorities**
- **Botany**
  - Citizenship 38, 127
  - Federal 208
  - Minorities 36-37
  - Women
    - Degrees 62
    - Enrollments 34
- **Business**
  - As Freshman Career Choice 23
  - Freshmen Plans for Major 16, 22
  - Minorities
    - Degrees 63-65, 81, 91
    - Employed 102-103
    - Enrollments 82
      - Faculty 83
  - Women
    - Degrees 56-60, 63-65, 72-73, 82, 91
    - Employed 102, 103
      - Faculty 83
    - Enrollments 82

C

- **Career Choices of Freshmen** 23
- **Carnegie Units Earned 12**
- **Carpenters** 94, 105
- **Cell Biology** 34-37
- **Census U.S.** 6
- **Certificates in Engineering Technology 72**
- **Chemistry**
  - Citizenship 38, 127, 140
  - High School Courses Taken 12, 16
  - Minorities 139-140
    - Degrees 139
    - Employed 92, 96, 98, 103, 143
      - Faculty 120, 128
      - Government 137
    - Enrollments 36-37
  - Women
    - Degrees 62, 133-135, 139, 141
    - Employed 92, 96-102, 105, 143
      - Faculty 115, 118-120, 126, 128, 142
      - Government 137
    - Enrollments 34-35
- **Chicano See Minorities**
- **Chiropractors** 74, 84
- **Citizenship** 38, 40, 43, 45, 104, 127, 136, 140, 157, 168, 177, 180, 238
- **Clergy**
  - As Freshman Career Choice 23
  - Employed 92
- **College Presidents Women 132**
- **Communications** 63-65
  - Minorities Degrees 63-65
  - Women Degrees 56, 60, 63-65, 72-73
- **Computer Equipment Operators** 94
- **Computer Sciences**
  - As Freshman Career Choice 23
  - Citizenship 38, 127
  - Freshmen Plans to Major 16, 21, 22
  - Minorities
    - Degrees 63-67, 106
    - Employed 92, 96, 98-100, 103, 107
      - Faculty 120, 128

omputer Sciences (con't)
- Minorities in Government 165
  - Enrollments 36-37
- Women
  - Degrees 56-60, 63-67, 72, 106, 110, 156, 158-160
  - Employed 92, 96-103, 105, 107, 109, 156 166
    - Faculty 115, 118-120, 126, 128
    - Government 165
  - Enrollments 34-35, 39

onstruction Occupations 94-95
ounselors 92
PA's (Certified Public Accountants) 80
raft Occupations 95
ryptographer 165

D

egrees
- Accounting 72-73
- Agriculture 56-60, 63-69, 72, 77, 91, 201-205
- Anatomy 210
- Anthropology 62, 233, 235-237
- Archeology 62
- Architecture 56, 60, 63-65, 72, 74, 99
- Area Studies 56, 60, 63-65, 72
- Art 56, 62-65
- Arts and Humanities 99, 243
- Associate 72, 197
- Astronomy 62, 99, 144-145
- Atmospheric Science 62, 149
- Attainment of Graduate 71
- Audiology 61
- Awarded to women 48-69
- Biochemistry 62, 138
- Biological Sciences 56-59, 62-67, 91, 99, 202-205
- Biophysics 62
- Botany 62
- Business 56, 60, 63-65, 72-73
- Cell Biology 62
- Chemistry 62, 99, 133-135, 139-141
- Chiropractic 74, 76, 84
- by Citizenship 136
- Communications 56, 60, 63-65, 73
- Comparative Literature 243
- Computer Sciences 56-60, 63-67, 106, 110, 156, 158-160
- Dentistry 74, 76, 84
- Doctorates
  - Awarded to Foreign Nationals 43, 44, 104, 127, 136, 140, 157, 168, 177, 180, 238
    - to Asians by Citizenship 45
  - Awarded to Minorities 42, 44, 46-50, 63, 100
  - Awarded to women 41-42, 46-50, 57, 63, 100
    - by Decade 41
  - Awarded to U.S. Citizens 46-51
- Earth Sciences 62, 91, 149, 151
- Ecology 34, 36-38
- Economics 62, 91, 233, 235-237

Degrees (con't)
- Education 41-42, 44, 50, 56, 60-61, 63-65, 72, 91, 99, 246-247
- Engineering 41-44, 48, 56-59, 61, 63-69, 72, 91, 99, 106, 167-188, 200
- Engineering Technology 56, 61, 63-65, 72, 195-196
- English 56, 62-65, 91, 243
- Environmental Sciences 101, 106
- Epidemiology 202
- Finance 60,
- Fine and Applied Arts 56, 62, 63-65, 243
- Foreign Languages 56, 61, 63-65, 72, 243
- Forestry 60
- Genetics 202
- Geography 62
- Geology 62, 133-135, 149-150
- Geosciences 149-151, 149-151, 154
- Graduate Attainment Rates 71
- Health Professions 56, 61-65, 91, 210, 216-217, 219, 221, 223, 225, 228-229
- Health Physics 137, 194
- Health Sciences 72, 209
- History 62, 243
- Home Economics 56, 62-65, 72-73, 91
- Hospital Administration
- Humanities 41-42, 44, 49, 243
- Interdisciplinary Studies 56, 63-65
- International Relations 62
- Journalism 60, 73
- Languages 243
- Law 56, 62-65, 72, 74, 76, 84, 91
- Letters 56, 62-65, 72, 243
- Library Sciences 56, 62-65, 72-73
- Life Sciences 41-44, 48, 56-59, 62-69, 72, 99, 106
- Linguistics 62, 243, 245
- Management and Marketing 60, 73
- Math Education 61, 247
- Mathematical Sciences 42, 44, 56-59, 62-69, 72, 91, 99, 106, 156-160
- Medical Sciences 91, 99
- Medical Technology 61, 230
- Medicine 74, 76, 84, 210-211
- Meteorology 62, 149
- Microbiology 62
- Military Sciences 59, 62-65, 72
- Music 62, 243
- Natural Resources 60
- Nursing 62, 91, 228-229
- Nutrition 209
- Oceanography 62, 149-150
- Operations Research 73
- Optometry 74, 76, 84, 221
- Osteopathy 74, 76, 84, 216
- Parks and Recreation 59, 62-65, 72
- Pathology 202
- Pharmacology 223
- Pharmacy 62, 74, 84, 91, 223-225
- Philosophy 59, 62-65, 72, 243
- Physical Education 61, 246-247

Degrees (con't)
- Physical Sciences 41-42, 44, 47, 56-59, 62-69, 72, 91, 99, 106, 133-136, 166
- Physical Therapy 230
- Physics 42, 44, 62, 133-135, 144-146
- Physiology 202
- Podiatry 74, 76, 84
- Political Science 62, 233, 235-237
- Professional Fields 41-42, 44, 50, 73-74, 76, 84, 99
- Protective Services 56, 62-65, 72
- Psychology 42, 44, 56-59, 62-69, 72, 91, 106, 233, 235-237
- Public Affairs 56, 62-65, 72, 233
- Radio and Television 73
- Radiation Protection 194
- Science Education 61, 247
- Social Sciences 41-42, 44, 49, 56-59, 62-69, 72, 91, 106, 233, 235-237
- Social Work 73, 233
- Sociology 62, 233, 235-237
- Speech and Hearing 61
- by State 79
- Statistics 161
- Theater 243
- Theology 56, 63-65, 73-74, 76, 84, 91
- Veterinary Medicine 74, 76, 219
- Visual & Performing Arts 62, 72, 243
- Zoology 62, 202

Dentistry
- As Freshman Career Choice 23
- Minorities
  - Degrees 74
  - Employed 92
    - Faculty 218
    - Government 232
  - Enrollments 217
- Women
  - Degrees 74, 76
  - Employed 92, 105
    - Faculty 218
    - Government 232
  - Enrollments 75

Disabled Scientists & Engineers 110
- in Special Education 8

Dietician 92
Doctorates Citizenship 43, 45, 127

E

Earth Sciences
- Minorities
  - Degrees 63-65, 154
  - Employed 103
    - Faculty 120
  - Enrolled 154
- Women
  - Degrees 62-65, 149-151
  - Employed 96-97, 100-101, 103, 105
    - Faculty 115, 118-120, 126, 128, 155
  - Enrolled 152-154
- See Also Geo and Environmental Sciences

- **Ecology**
  - Citizenship 38, 127
  - Degrees 34, 36-38
  - Enrollments 34-37
- **Economics**
  - Citizenship 38, 127
  - Government 239
  - Minorities
    - Degrees 91, 238
    - Employed 98
      - Faculty 120
    - Enrollments 36-37
  - Women
    - Degrees 62, 91, 233, 235-237
    - Employed 98, 105, 239, 242
      - Faculty 115, 126
    - Enrollments 34-35
- **Education**
  - Freshmen Plans for Major 16, 22
  - Government 248
  - Minorities
    - Degrees 42, 44, 50, 63-65, 91
    - Employed 52, 102-103
  - Women
    - Degrees 41-42, 50, 56, 61-65, 72, 91, 246-247
    - Employed 52, 102-103
      - Faculty
    - Enrolled 32
- **Educational Level**
  - of 1980 HS Seniors 18
  - of Labor Force 12-13, 87, 89, 91
- **Electricians** 94, 105
- **Employment Status**
  - PhD Scientists and Engineers 99
- **Endrocrinology**
- **Engineering**
  - As Freshman Career Choice 23
  - Citizenship 38, 40, 127, 168, 177, 180
  - Exam Scores 14-16
  - Freshman Plans for Major 16, 21, 22
  - Immigrants 111
  - Minorities
    - Degrees 42, 44, 48, 63-65, 91, 172-180, 193-194, 200
      - Schools Awarding Most 185-188
    - Employed 52, 92, 96-102, 106, 108
      - Faculty 117, 120, 128
      - Government 199
    - Enrollments 36-37, 190-194
  - Nuclear 193
  - Retention 200
  - Women
    - Degrees 41-42, 48, 56-59, 61, 63-69, 72, 91, 110, 167, 169-179, 200
      - Schools Awarding Most 181-184
    - Employed 52, 92, 96-103, 105, 106, 108-109, 166
      - Faculty 115, 117-120, 126, 128
      - Government 199
    - Enrollments 34-35, 39, 189-190, 192
- **Engineering Fields**
  - Citizenship 38
  - Degrees 61, 169-171, 174-179
  - Employed
    - Government 199
  - Enrollments 34-38, 192
- **Engineering Technology**
  - Minorities
    - Certificates 198
    - Degrees 63-65, 195-198
    - Enrollments 198, 200
  - Women
    - Certificates 72
    - Degrees 56, 61, 63-65, 72, 195-197
    - Enrollments 198
- **English**
  - Freshmen Plans for Major 22
  - High School Courses Taken 12, 16
  - Women
    - Degrees 62, 91
    - Faculty 121-122
- **Enrollments**
  - Agriculture 34-38, 78
  - Anatomy 34, 36-38
  - Anthropology 34, 36-38
  - Architecture 78
  - Astronomy 34-37, 148
  - Atmospheric Sciences 34, 36-38
  - Biochemistry 34, 36-38
  - Biological Sciences 34-38
  - Botany 34, 36-38
  - Business 32, 82
  - Cell Biology 32, 34-38
  - Chemistry 34, 36-38
  - Computer Sciences 34-38
  - Dentistry 217
  - Ecology 34, 36-38
  - Economics 34, 36-38
  - Education 32
  - Engineering 32, 34-40, 189-194, 200
  - Engineering Technology 198
  - Entomology 34, 36-38
  - Environmental Sciences 34-40
  - Foreign 29, 31, 37, 38
  - Freshmen 20
  - Genetics 34, 36-38
  - Geography 34, 36-38
  - Geosciences 34, 36-38, 152-154
  - Health Physics 194
  - Health Sciences 36-38
  - Hist of Science 34, 36-38
  - Humanities 32
  - Law 85
  - Life Sciences 32, 34-40
  - Linguistics 34, 36-38
  - Mathematical Sciences 34, 36-38
  - Medicine 210, 212-214
  - Microbiology 34, 36-38
  - Minority 24-25, 27-29, 36-37, 70, 211-2220, 222, 224-228
    - See Also Specific Fields
  - Neurology 34, 36-38,
  - Nursing 34, 36-38, 228
  - Nutrition 34, 36-38
  - Oceanography 34, 36-38, 152
- **Enrollments (con't)**
  - Optometry 221-222
  - Osteopathy 216
  - Pathology 34, 36-38
  - Pharmacology 34, 36-38, 226
  - Pharmacy 225-226
  - Physical Sciences 32, 34-40
  - Physics 34, 36-38, 147-148
  - Physiology 34, 36-38
  - Podiatry 227
  - Political Sciences 34, 36-38
  - Public Health 231
  - Psychology 32-34, 36-38
  - Radiation Protection 194
  - Social Sciences 32, 34-40
  - Sociology 34, 36-38
  - Speech Pathology 34, 36-38
  - by State 70
  - Veterinary Medicine 34, 36-38, 75, 219
  - Zoology 34, 36-38
- **Environmental Design See Architecture**
- **Environmental Sciences**
  - Citizenship 38, 40, 127
  - Minorities
    - Degrees 42, 44, 154
    - Employed 96, 98-100, 102-103, 106, 108
      - Faculty 117, 120, 128
    - Enrollments 36-37
  - Women
    - Degrees 42, 62, 149-151
    - Employed 96-102, 104-110, 156, 166
      - Faculty 115, 117-120, 126, 128
    - Enrollments 34-35, 39, 152-153
- **Exam Scores** 14-16
- **Executive Orders** 3

F

- **Faculty**
  - Agricultural Sciences 115-120, 126-128
  - Anthropology 115, 120, 126-128
  - Astronomy 115, 120, 126-128
  - Atmospheric Sciences 115, 120, 126-128
  - Biological Sciences 115, 118-120, 126-128
  - Business 83
  - Chemistry 115, 120, 126-128, 142
  - Computer Sciences 115, 120, 126-128
  - Dentistry 218
  - Earth Sciences 115, 120, 126-128
  - Economics 115, 126-128
  - Engineering 115, 117-120, 126-128
  - English 121-122
  - Environmental Sciences 115, 12-, 126-128
  - Geosciences 155
  - Health Sciences 126-128
  - History 121-122
  - Humanities 121-122
  - Languages 121-122
  - Law 83
  - Life Sciences 115, 117-120, 126-128

Faculty (con't)
  Mathematical Sciences 115-116, 118-120, 126-128, 162-163
  Medical Sciences 115, 126-128
  Medicine 215
  Oceanography 115, 126-128
  Physical Sciences 115-116, 118-120, 126-128
  Physics 115, 126-128
  Political Science 241
  Psychology 115, 117-120, 126-128
  by Rank 115-125
  Science/Engineering 115-120, 126-128
  Social Sciences 115, 117-120, 126-128
  Sociology 115, 126-128
  Statistics 126-128
  Tenure 119-120, 122, 124-125
  Veterinary Medicine 220
  Women 115-126, 128
Farmer as Career choice 23
Federal Employment
  Agricultural Sciences 208
  Archeology 239
  Astronomy 137
  Biological Sciences 208
  Cartography 137
  Chemistry 137
  Computer Sciences 165
  Dentistry 232
  Economics 239
  Education 248
  Engineers 199
  Geosciences 137
  Health Sciences 232
  History 239
  Hydrology 137
  Life Sciences 208
  Law 86
  Mathematical Sciences 165
  Medical Technology 232
  Medicine 232
  Metallurgy 137
  Minority PhDs 114
  Nursing 232
  Oceanography 137
  Physical Sciences 137
  Physics 137
  Podiatry 232
  Psychology 239
  Social Sciences 239
  Social Work 239
  Statistics 165
  Veterinary Medicine 232
  See Also Specific Fields
Fine and Applied Arts 56, 62-65
Foreign Languages 56, 61, 63-65, 72, 243-244
Foreign Nationals
  Degrees 43-45, , 104, 127, 136, 140, 157, 168, 177, 180, 238
  Enrollments 38, 40
  In Natural Science 29

Forestry
  As Freshman Career Choice 23
  Freshman Plans for Major 22
  Women, Degrees 60
Freshman
  Career Choices of 23, 26
  Plans of College Major 16, 21-22
  Racial Background 21

G

Genetics
  Citizenship 38, 127
  Degrees 202
  Enrollments 34-37
Geography
  38, 127
  Minority Enrollments 36-37
  Women
    Degrees 62
    Enrollments 34-35
Geology
  High School Courses Taken 12, 16
  Minorities
    Degrees 154
    Enrollments 36-37, 154
  Women
    Degrees 62, 133-135, 149-150, 154
    Enrollments 34-35, 152
Geosciences
  Citizenship 38, 127
  Degrees 149-152
  Minorities
    Enrollments 36-37
    Government 137
  Women
    Degrees 149-151
    Employed
      Faculty 155
      Government 137
    Enrollments 34-35
Government Employment (See Federal Employment)
Graduate Degree Attainment 71
Graduate Student Support 53

H

Handicapped Physically (see also Disabled)
  In Special Education Programs 8
  Scientists and Engineers 110
Health Physics 137, 194
Health Professions74-76, 210-219, 232
Health Sciences Degrees 209
  Citizenship 38, 127
  Freshman Plans for Major 16, 22
  Minorities
    Degrees 42, 44, 63-65
    Employed 93
      Faculty 128
    Enrollments 36-37
  Technologists and Technicians 72

Health Science Degrees (con't)
  Women
    Degrees 42, 56, 63-65,
    Employed
      Faculty 126, 128
    Enrollments 34-35
High School Graduates 11, 112
  Carnegie Units Earned 12
  College Enrolled 17, 19
Hispanics 88
  See also Minorities
History
  Faculty 121-122
  Freshman Plans for Major 22
  High School Courses Taken 12, 16
  Women
    Degrees 62, 243
    Employed 104, 239, 244
History of Science 243
Home Economics
  Minorities
    Degrees 63-65, 91
  Women
    Degrees 56, 62-65, 72-73, 91
Hospital Administration 231
Humanities
  Freshman Plans for Major 22
  Minorities 244
    Degrees 42, 44, 49
    Employment Plans 52, 104
    Faculty 121
  Women 244
    Degrees 41-42, 49, 99, 243
    Employment Plans 52, 104
    Faculty 121-123

I

Immigrant Scientists and Engineers 111
Indian American - See Minorities
Industry - See Business
Interdisciplinary Studies 56, 63-65
International Relations
  Degrees 62

J

Journalism
  As Freshman Career Choice 23
  Minorities 93
  Women
    Degrees 60, 73
    Employed 93
Judges 92, 105

L

Lab Technicians 93, 197
Labor Force
  Educational Level 12-13, 87, 89, 91
  PhD Participation Rates 99
Languages
  Minorities
    Degrees 63-65
    Employed 121

- **Languages (con't)**
  - Women
    - Degrees 56, 61, 63-65, 243
    - Employed 244
      - Faculty 121-122
- **Law**
  - As Freshman Career Choice 23
  - Minorities
    - Degrees 63-65, 74-91
    - Employed 86, 92
      - Faculty 83
      - Government 86
    - Enrollments 85
  - Women
    - Degrees 56, 62-65, 72-74, 84, 91
    - Employed 76, 96, 92, 105
      - Faculty 83
      - Government 86
    - Enrollments 85
- **Letters**
  - Degrees 62, 72
- **Library Science**
  - Minorities
    - Degrees 63-65
    - Employed 92
  - Women
    - Degrees 56, 62-65, 72-73
    - Employed 92, 105
- **Life Sciences**
  - Citizenship 38, 40, 127
  - Minorities
    - Degrees 42, 44, 48, 63-69
    - Employed 52, 96, 98-100, 102-103, 105-108
      - Faculty 117, 120, 128
      - Government 208
    - Enrollments 36-37
  - Women
    - Degrees 41-42, 48, 56-59, 62-69, 72
    - Employed 52, 96-102, 105-110, 156, 166, 242
      - Faculty 115, 117-120, 126, 128
      - Government 208
    - Enrollments 34-35, 39
- **Linguistics**
  - Citizenship 38, 127
  - Minorities Enrollments 36-37
  - Women
    - Degrees 62, 243, 245
    - Enrollments 34-35
- **Literature** 243-245

M

- **Managers** 92, 101, 109
- **Mathematical Sciences**
  - Actuary 165
  - Assessment 10
  - Citizenship 38, 40, 127, 157
  - Exam Scores 14-16
  - Freshman Plans for Major 16, 21, 22
  - High School Courses Taken 12, 16
  - Immigrants 111
- **Mathematical Sciences (con't.)**
  - Minorities
    - Degrees 42, 44, 63-69, 91
    - Employed 96, 98-100, 102-103, 105-108
      - Faculty 120, 128
      - Government 165
    - Enrollments 36-37
  - Proficiency of 17 yr Olds 10
  - Women
    - Degrees 42, 56-59, 62-69, 72, 91, 99, 110, 156, 158-160, 164
    - Employed 92, 96-102, 105-110, 156, 164, 166
      - Faculty 115, 118-120, 126, 128, 162-164
      - Government 165
    - Enrollments 34-35
- **Mathematics Assessment** 10
- **Mathematics Teachers** 129
- **Medical Sciences**
  - Citizenship 127
  - Degrees 209
  - Employment 98, 101, 103
    - Faculty 115, 126-128
  - Freshman Plans for Major 22
- **Medical Technology**
  - Degrees 61
- **Medicine**
  - As Freshman Career Choice 23
  - Government 232
  - Minorities
    - Degrees 74, 91, 211
    - Employed 92, 232
      - Faculty 215
      - Residents 214
    - Enrollments 212-214
  - Women
    - Degrees 74, 81, 210
    - Employed 76, 92, 100-101, 105, 232
      - Faculty 215
      - Residents 214
    - Enrollments 75, 210, 212, 214
- **Metallurgy** 137
- **Meteorology** 62, 137
- **Mexican American See Minorities**
- **Microbiology**
  - Citizenship 38, 127
  - Minorities Enrollments 36-37
  - Women
    - Degrees 62
    - Enrollments 34-35
- **Military Science**
  - Degrees 56, 62-65, 72
- **Minorities**
  - In Accounting 81
  - by Age 8
  - In Agriculture 36-37, 42-44, 63-65, 91, 96, 98-100, 102-103, 105-108
  - In Anatomy 36-37
  - In Anthropology 36-37, 96, 233
  - In Architecture 63-65
  - In Art 63-65
  - In Astronomy 36-37, 96, 98, 103
- **Minorities (con't)**
  - In Atmospheric Sciences 36-37,42, 96, 103
  - In Biochemistry 36-37
  - In Biological Sciences 36-37, 42, 44, 63-65, 96, 98-100, 102-103, 105-108
  - In Botany 36-37
  - In Business and Management 63-65, 91, 81
  - In Chemistry 36-37, 96, 98-99, 102-103
  - In Chiropractic Medicine 74
  - In College, by State 18
  - In Computer Sciences 36-37, 63-65, 96, 98, 103
  - In Dentistry 74, 91, 217-218
  - In Earth Sciences 36-37, 91, 96, 103, 154
  - In Ecology 36-37
  - In Economics 36-37, 91, 96, 98, 103, 233
  - In Education 42, 44, 50, 52, 63-65
  - Educational Level 7, 12-13, 87-88, 90-91
  - In Engineering 36-37, 42, 44, 48 52, 63-65, 91, 96, 98, 103, 172-180, 185-188, 190-194, 200
  - In Engineering Technology 36-37, 63-65, 195-198
  - In English 63-65
  - Enrollments, College 18, 36-37, 70
    - by State 70
  - In Entomology 36-37
  - In Environmental Sciences 36-37, 96, 98, 103, 106, 154
  - Exam Scores 14-16
  - In Federal Employment 86, 114, 137, 165, 199, 208, 232, 239, 248
  - In Fine and Applied Arts 63-65
  - Foreign Born 45
  - In Forestry 208
  - Freshmen 21
  - In Genetics 36-37
  - In Geography 36-37
  - In Geology 36-37
  - In Geoscience 154
  - In Health Professions 36-37, 91
  - In History 233, 239
  - In Humanities 91,104
  - In Journalism 93
  - In Languages 63-65
  - In Law 63-65, 85, 91
  - In Library Sciences 63-65
  - In Life Sciences 36-37, 42, 44, 48 52, 63-65, 96, 98, 103, 106
  - In Linguistics 36-37
  - In Management and Marketing
  - In Mathematics 36-37, 42, 44, 63-65 91, 96, 98, 103, 165
  - In Medical Sciences 36-37, 96, 98, 103, 106
  - In Medicine 74, 91, 211-215
  - In Microbiology 36-37
  - In Natural Science/Engineering 29, 66-69
  - In Nursing 36-37, 91, 228

- **Minorities (con't)**
  - in Nutrition 36-37
  - in Oceanography 36-37, 96, 103
  - in Optometry 74, 222
  - in Osteopathy 74, 216
  - in Pharmacology 36-37
  - in Pharmacy 74, 91, 224
  - in Philosophy 63-65
  - in Physical Sciences 36-37, 42, 44, 47, 52, 63-65, 91, 103, 106, 166
  - in Physics 36-37, 42, 44, 103
  - in Physiology 36-37
  - in Podiatry 74, 227
  - in Political Science 36-37, 233
  - in Population 7, 88
  - in the Professions 50
  - in Psychology 36-37, 42, 44, 63-65 91, 103, 106, 233
  - in Public Health 36-37
  - in Sociology 36-37, 233
  - in Social Sciences 36-37 42, 44, 49, 52, 63-65, 91, 103, 106, 233
  - in Statistics 36-37
  - Teachers 130
  - Technicians and Technologists 93
  - in Theology 63-65, 74, 92
  - in U.S. Population 6, 88
  - in Veterinary Medicine 74, 219-220
  - in Vocational, Technical Studies 91
  - Women
    - in Engineering 200
    - in Medicine 214
  - Writers 93
  - in Zoology 36-37
  - See Also Subject Fields
- **Music**
  - As Freshman Career Choice 23
  - Degrees 62, 243
  - Freshman Plans for Major 22

N

- **Native Americans See Minorities**
- **Natural Resources** Degrees 60
- **Neurology**
  - Citizenship 127
  - Enrollments 34-37
- **Nursing**
  - As Freshman Career Choice 23
  - Citizenship 38, 127
  - Government 232
  - Minorities
    - Degrees 228
    - Employed 92
    - Enrollments 36-37, 228
  - Women
    - Degrees 228
    - Employed 92
    - Enrollments 34-35, 228
- **Nutrition**
  - Citizenship 38, 127
  - Enrollments 34-38
  - Government 232
- **Nutrition (con't)**
  - Women
    - Degrees 209
    - Employed 92

O

- **Occupation** by Yrs of Education 89
- **Oceanography**
  - Citizenship 38, 127
  - Degrees 149-150
  - Employed 96, 100, 101, 103
    - Faculty 115, 126-128
    - Government 137
  - Enrollments 34-38, 151
- **Operations Research**
  - Degrees 73
- **Optometry**
  - As Freshman Career Choice 23
  - Government 232
  - Minorities
    - Degrees 74, 76
    - Enrollments 222
  - Women
    - Degrees 74, 76, 221
    - Enrollments 75, 221-222
- **Orientals See Minorities**
- **Osteopathy**
  - Minorities
    - Degrees 74
    - Enrollments 216
  - Women
    - Degrees 74, 216
    - Enrollments 75, 216

P

- **Parks and Recreation** 63-65, 72
- **Personnel/Labor Relations** 92, 105
- **Pharmaceutical Sciences**
  - Citizenship 38, 127
  - Minorities Ennrollments 36-37
  - Women
    - Degrees 223
    - Enrollments 34-35, 226
- **Pharmacology** 34-38, 223, 226
- **Pharmacy**
  - As Freshman Career Choice 23
  - Government 232
  - Minorities
    - Degrees 74, 76, 224
    - Employed 92
    - Enrollments 225-226
  - Women
    - Degrees 62, 74, 76, 223, 225
    - Employed 92, 105
    - Enrollments 225-226
- **Philosophy**
  - Minorities 244
    - Degrees 63-65
  - Women
    - Degrees 56, 62-65, 72, 243
    - Employed 244
- **Photographers** 93
- **Physical Education** 61, 246-247
- **Physical Sciences**
  - Citizenship 38, 40, 127, 136
  - Exam Scores 14-16
  - Freshman Plans for Major 16, 21, 22
  - High School Courses Taken 12, 16
  - Minorities
    - Degrees 42, 44, 47, 63-65, 166
    - Employed 52, 96, 103, 107
      - Faculty 116, 120, 128
      - Government 137
    - Enrollments 37-38
  - Women
    - Degrees 41-42, 47,56-59, 62-69, 72, 133-135
    - Employed 52, 96-102, 105-110, 166
      - Faculty 115-116, 118-120, 126, 128
      - Government 137
    - Enrollments 34-35, 39
- **Physical Therapy**
  - Government 232
  - Minorities Employed 232
  - Women
    - Degrees
    - Employed 232
- **Physically Handicapped Scientists and Engineers** 110
- **Physicians See Medicine**
  - As Freshman Career Choice 23
- **Physics**
  - Citizenship 38, 127, 145-146, 148
  - Minorities
    - Degrees 42, 44, 146
    - Employed 96, 98-99, 102-103, 105, 146
      - Faculty 120, 128
      - Government 137
    - Enrollments 36-37
  - Women
    - Degrees 42, 62, 133-135, 144, 146
    - Employed 96-102, 105
      - Faculty 115, 126
      - Government 137
    - Enrollments 34-35, 147-148
    - Teachers 128
- **Physiology**
  - Citizenship 38, 127
  - Minorities Enrollments 36-37
  - Women
    - Enrollments 34-35
- **Podiatry**
  - Minorities
    - Degrees 74
    - Enrollments 227
  - Women
    - Degrees 74, 76
    - Enrollments 75, 227
- **Political Science**
  - Citizenship 38, 127, 238
  - Minorities
    - Degrees 233
    - Employed 241
    - Enrollments 36-37

- **Political Science (con't)**
  - Women
    - Degrees 62, 233, 235-237
    - Employed 242
      - Faculty 126, 241
    - Enrollments 34-35
- **Population U.S.**
  - Age 18 7, 87
  - Age 17 & HS Graduates 11
  - Educational Level of 12, 13, 87, 89-91
  - Minorities 6, 7, 88
  - School Age 9
  - Women
- **Postdoctorates** 126-128
- **Presidents, College** 132
- **Professional Fields**
  - Citizenship 127
  - Freshman Plans for Major 22
  - Minorities
    - Degrees 42, 44, 50, 74
    - Plans of PhDs 52
  - Women Degrees 41-42, 50, 73-74
- **Professional Workers** 101
- **Protective Services** 59, 62-65, 72
- **Psychology**
  - As Freshman Career Choice 23
  - Citizenship 38, 40, 127, 238
  - Minorities
    - Degrees 42, 44, 63-65, 233
  - Minorities
    - Employed 96, 98-99, 102-103,105,108
      - Faculty 117, 120, 128
    - Enrollments 36-37
  - Women
    - Degrees 42, 56-59, 62-69, 72, 76, 233, 235-237
    - Employed 96-102, 105, 108-109, 242
      - Faculty 115, 117-120, 126, 128
    - Enrollments 34-35
- **Public Administration**
  - Degrees 73
- **Public Affairs** 62
- **Public Health** 231
- **Puerto Rican See Minorities**

R

- **Race See Minorities**
- **Radiation Protection** 194
- **Radio and TV Degrees** 60, 73
- **Religion See Theology**
- **Reporters** 93

S

- **Sales Occupations** 93
- **S.A.T. Scores** 14-16
- **School Principals, Counselors** 129-130
  - As Freshman Career Choice 23
- **Science**
  - Assessment 10
  - High School Courses Taken 12, 16
  - and Math Teachers 129
- **Scientists See Specific Field**
  - As Freshman Career Choice 23
- **Secretaries** 93
- **Social Sciences**
  - Citizenship 38, 40, 127, 238
  - **Exam** Scores 14-16
  - Freshman Plans for Major 16, 21, 22
  - Immigrants 111
  - Minorities
    - Degrees 42, 44, 49, 63-65, 233
    - Employed 52, 92, 96, 98, 108
      - Faculty 117, 120, 128
      - Government 239
    - Enrollments 36-37
  - Women
    - Degrees 41-42, 49, 56-59, 62-69, 72 233, 235-237
    - Employed 52, 92-102, 242
      - Faculty 115, 117-120, 126, 128
      - Government 239
    - Enrollments 34-35, 39
- **Social Studies High School Courses** 12, 16
  - Teachers 129
- **Social Work** 23, 105, 239-240
- **Sociology**
  - Citizenship 38, 127, 238
  - Minorities
    - Degrees 238
    - Employed 96
      - Faculty 128
    - Enrollments 36-37
  - Proficiency Age 17 10
  - Women
    - Degrees 62, 233, 235-237
    - Employed 96, 242
      - Faculty 115, 126
    - Enrollments 34-35
- **Spanish See Minorities**
- **Speech and Hearing** 61
- **State**
  - Degree Awards 79
  - Minorities in College 18, 79
- **Statistics**
  - As Freshman Career Choice 23
  - Citizenship 38, 127
  - Minorities 165
  - Women
    - Degrees 161
    - Employed 100-101
      - Faculty 126
      - Government 165
- **Support Source of Graduate Student** 53
- **Surgery**
- **Systems Analysts** 92, 105

T

- **Teachers**
  - Characteristics of 130
  - College 92, 105 **(See also Faculty)**
  - Employed 92, 101, 109
  - by Highest Degree 130
  - Physics 128
  - Public School 105, 130
  - Private School 131
  - Science and Math 12
- **Teaching**
  - As Freshman Career Choice 23
  - Employed 130
- **Technicians**
  - Degrees 72, 197
  - Employed 94
- **Tenure** 119, 120, 124-125, 162-163
- **Theater Arts** 243
- **Theology**
  - Minority
    - Degrees 63-65, 74
    - Employed 92
  - Women
    - Degrees 56, 63-65, 73-74, 76
    - Employed 92, 109
- **Therapist** 92

U

- **PhD Unemployment Rates** 99
- **Uniform Guidelines Employee Selection** 4

V

- **Visual & Performing Arts** 62, 72
- **Veterinary Medicine**
  - As Freshman Career Choice 23
  - Government 232
  - Minorities
    - Degrees 74
    - Enrollments 219
  - Women
    - Degrees 74, 76, 219
    - Enrollments 75, 219

W

- **Women See Specialty Fields, Faculty, Enrollments, Degrees**
- **Writers** 93

Z

- **Zoology**
  - Citizenship 38, 12
  - Minorities Enrollments 36-37
  - Women
    - Degrees 62
    - Enrollments 34-35

OTHER CURRENT CPST PUBLICATIONS

SCIENTIFIC, ENGINEERING, TECHNICAL MANPOWER COMMENTS, periodical, 10 issues/yr. Free to CPST members. Non members: $70/year; 2 yrs $130; 3 yrs./$190.

A regular 32 page digest of current developments affecting the recruitment, training and utilization of scientists, engineers and technologists. Regular sections provide information and new data on supply and demand, salaries, women and minorities, education, and federal activities affecting technical manpower.

SALARIES OF SCIENTISTS, ENGINEERS AND TECHNICIANS, A Summary of Salary Surveys,* Fourteenth Edition, January, 1990. Members - $40; Non-members - $50.

Detailed information from more than 50 salary surveys on starting and advanced salaries in industry, government and educational institutions with breakouts by field, highest degree, sex, years since first degree, age group, category of employment, work activity, type of employer, geographic area, academic rank, Civil Service grade and grade distribution, and level of responsibility. Earlier editions are available at half price for comparing salaries over time.

OCCASIONAL PAPERS Annual Series, $45 members, $60 to non-members. Individual papers $15 to members, $20 to non-members.

A series of four to five papers per year, 20-30 pages each, profusely illustrated with charts and graphs, on topics of special interest to producers and users of scientists and engineers. The first four (of five) 1989 titles are:

Recruiting Doctoral Scientists and Engineers, Today and Tomorrow

Women in Science: Progress and Problems

Look Who's Coming to School! Changing Demographics: Implications for Science Education

American Minorities in Science and Engineering

COMPETITION FOR HUMAN RESOURCES IN SCIENCE AND ENGINEERING IN THE 1990s, May 1988. Members - $15; Non-members - $20.

Proceedings of a Symposium where experts discussed demographic changes, present status and required agenda to meet the upcoming challenges of national and international competition. Includes charts and tables.

SCIENTIFIC MANPOWER 1987 AND BEYOND, January 1987. Members - $15; non-members - $15

Proceedings of a Symposium detailing the effect of today's budgets on tomorrow's science and engineering manpower.

---

* Next Edition in preparation for publication in early 1990.

THE INTERNATIONAL FLOW OF SCIENTIFIC TALENT: Data, Policies and Issues, September, 1985. Members - $12.50; Non-members - $15

Proceedings of a Symposium exploring the increasing participation of foreign nationals in this country's educational institutions and workforce.

THE TECHNOLOGICAL MARKETPLACE - Supply and Demand for Scientists and Engineers, May 1985.* Members $20; Non-members $25

This 54-page report, which includes over 50 tables and charts, examines past, present and future imbalances in the supply of and demand for scientists and engineers. The 1990 edition is expected to be in the form of a chartbook.

* Next Edition in preparation for publication in early 1990.

CPST MEMBERSHIP INFORMATION

Membership in the Commission on Professionals in Science and Technology is open to professional societies, corportations, institutions and individuals who share its interests and objectives, as outlined in the second paragraph of page i. Commissioners, representing the member societies and the corporate members, meet on a regular basis to consider topics of current interest.

The four categories of memberships are: Societal, Corporate, Institutional and Individual. Societal and Corporate Dues are $600/year and up.

Institutional membership is open to academic, corporate, or government organizations, departments or divisions. The fee is $70 for each 12 months.

Benefits include: one free subscription to **MANPOWER COMMENTS** (described on page 261); a discount on all other Commission publications; a discount on Symposia registrations and **PROCEEDINGS**, and two free data requests per year - that is, either a statistic provided by phone or an appropriate table mailed.

Individual membership is open to individuals at a home address. The fee is $50 for each 12 month period. Benefits include one free subscription to **MANPOWER COMMENTS** and a member discount on other Commission publications.

ERRATA

1. There is no Table 2-12.

2. Table 3-2 on page 76 is out of numerical table order, but is indexed appropriately to page 76.

3. The table number on pages 159 and 160 should read "TABLE 6-35 (continued)

Users are requested to call our attention to any additional errors they may find.